FIRE ENGINEERING

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The Journal of the Fire Protection Profession Since 1877

SEPTEMBER, 1951

Unattended Monitors Isolate Tank of Burning Alcohol at Charleston, W. Va. (Details Elsewhere in This Issue).

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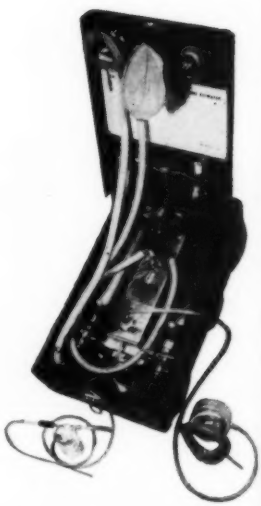

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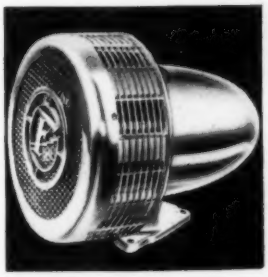

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

!!!!

THE August Convention Issue of FIRE ENGINEERING, it can now be told, made publishing history! It was the largest convention number ever published in all our 74 years—largest in editorial and advertising content, and largest in readership.

● It also broke all records for editing and printing. Setting the I.A.F.C. convention ahead two weeks before its usual period necessitated a complete revision of our publishing schedules (did you know that we also publish a number of *other* leading journals?). And right here—a big orchid to our printers, C. J. O'Brien of New York City, who, laboring 'round-the-clock, squeezed a month's work into two weeks without sacrificing printing quality—or good humor!

● Orchids also to our advertisers—old and new, who helped make the record-breaking book possible, and to our army of readers who as regularly as the I.A.F.C. convention comes around, renew their subscriptions!

● It isn't going to be easy to maintain that publishing momentum, but we're going to *try!* In those endeavors, we will hold to that little truism of a great writer, Louise M. Alcott, who once said: *"That is a good book, it seems to me, which is opened with expectation and closed with profit!"*

The Publishers

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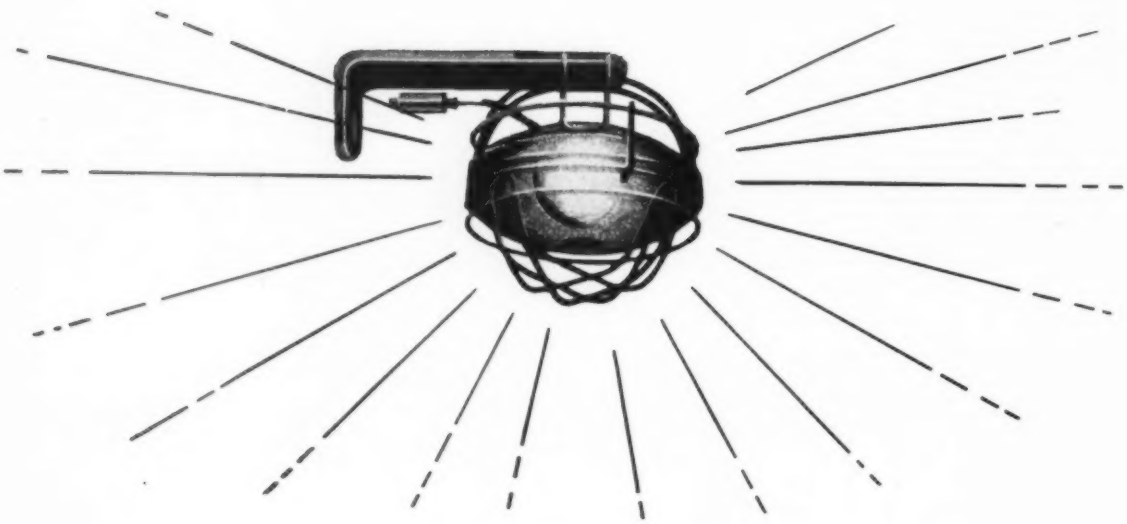

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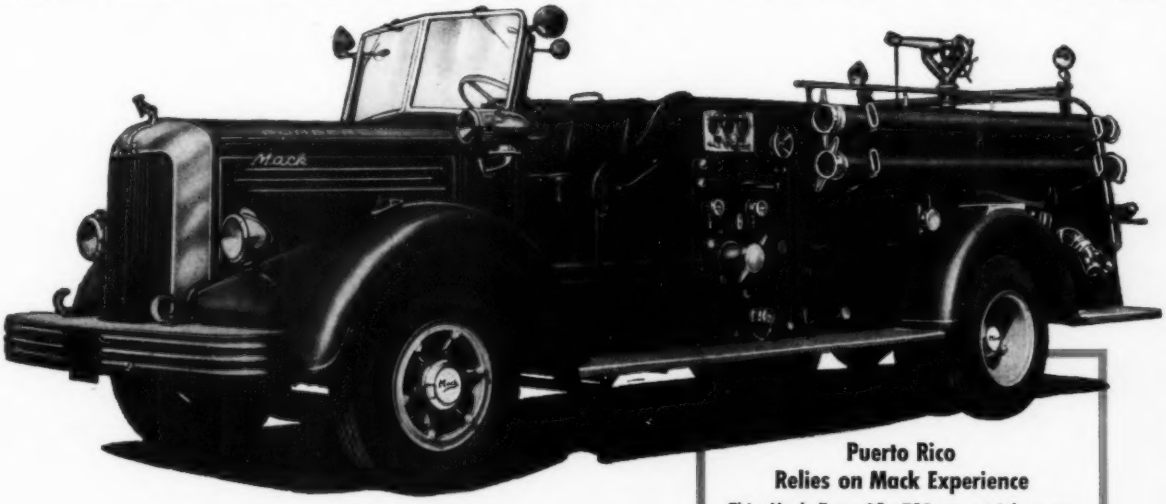

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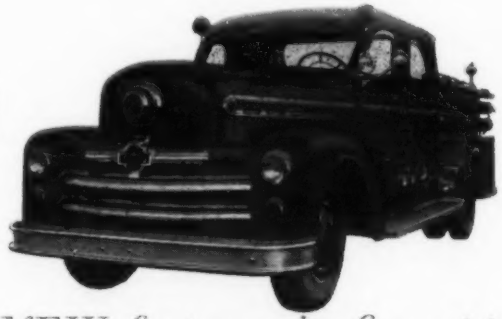

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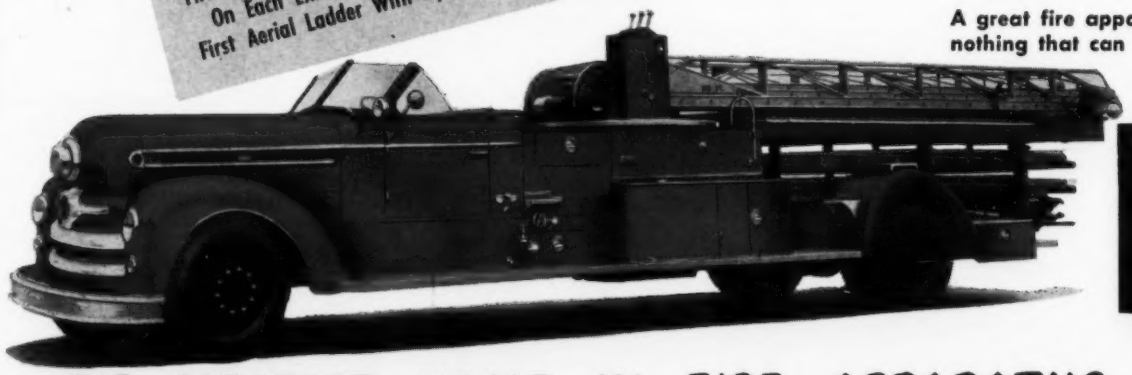

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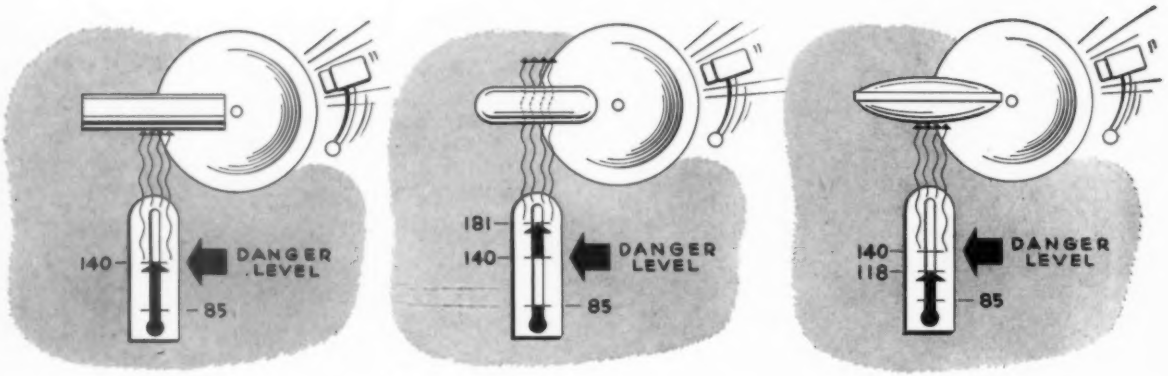

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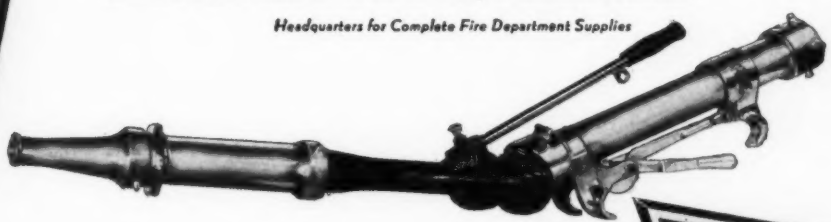

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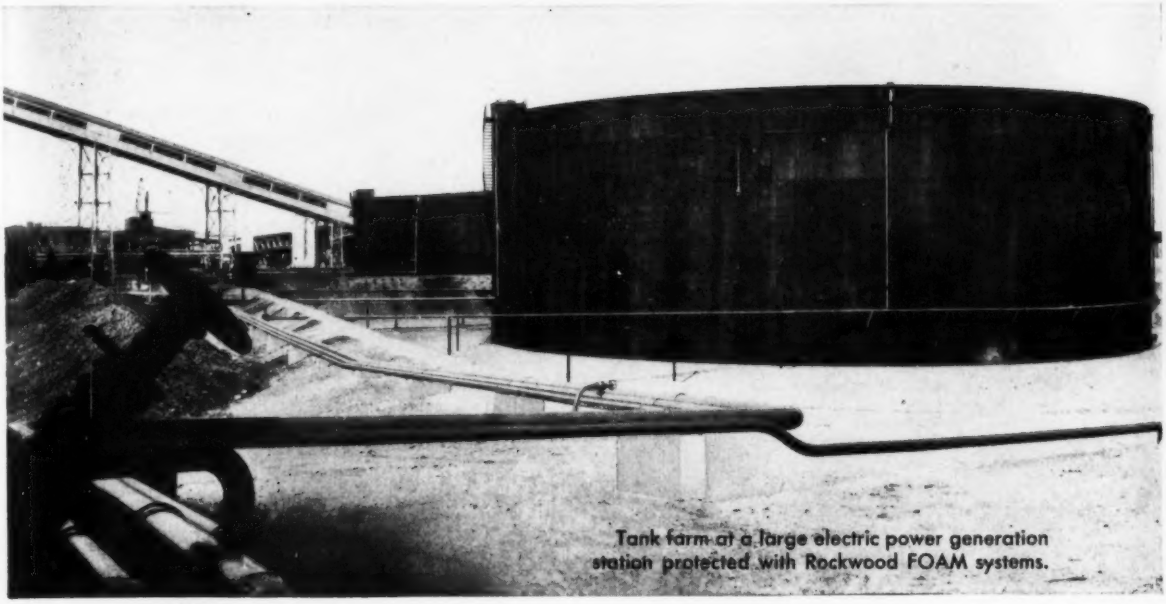
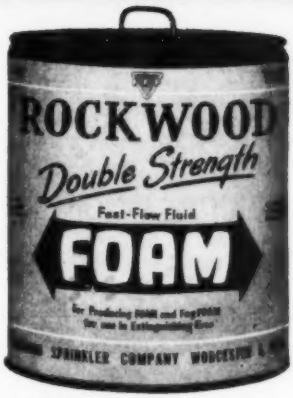


Tank farm at a large electric power generation station protected with Rockwood FOAM systems.



better FIRE PROTECTION begins with ROCKWOOD PRODUCTS

You'll be surprised at all the places in your refinery — plant or city where Rockwood fire fighting products can help you *cut fire losses.*

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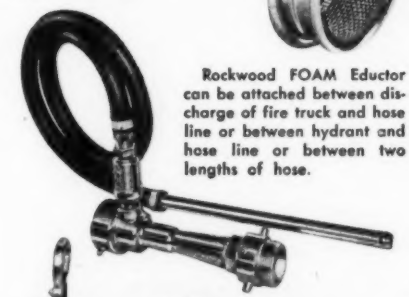
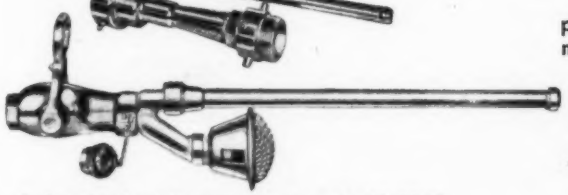
Ask your fire equipment distributor, today for complete data and prices on Rockwood's growing family of modern fire fighting products.

New *Lightweight* type FFF Rockwood FogFOAM Nozzle. Discharges FogFOAM — solid FOAM stream or High Velocity WaterFOG. →



Rockwood FOAM Eductor can be attached between discharge of fire truck and hose line or between hydrant and hose line or between two lengths of hose.



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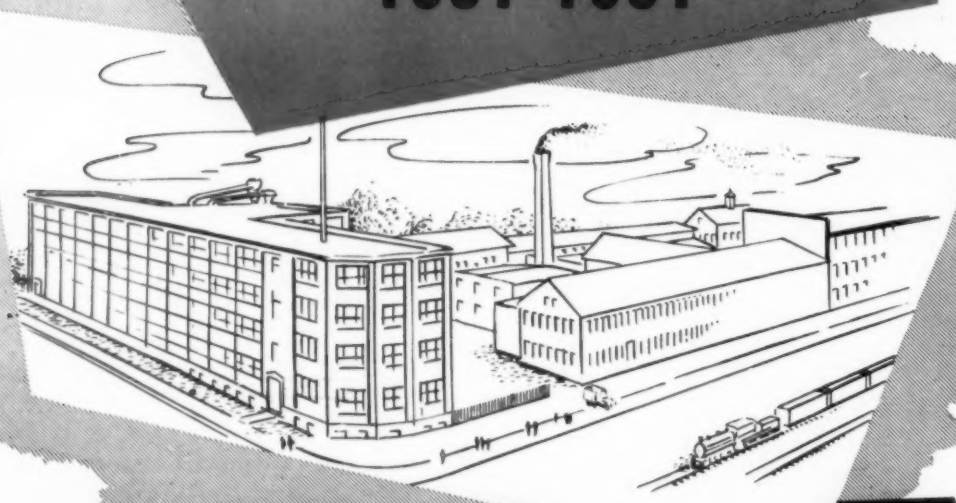

During 1851, in the City of Boston, Massachusetts, was made the first practical application of the Morse telegraph to fire signaling, providing a public and always accessible means for calling the fire department. John N. Gamewell shortly thereafter, acquired patent rights for the system of fire signaling thus applied in Boston and which has since become universally known as The Gamewell Fire Alarm System.

The well estabished reputation for reliability, durability, and efficiency of Gamewell equipment, produced by a small force of highly skilled workmen, has resulted in the widespread use of The Gamewell System not only in the U. S. A. but also in many other countries.

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SEPTEMBER, 1951

FIRE ENGINEERING

VOL. 104, NO. 9

With the Editor

When Apparatus "On Order" Doesn't Count

There is a story about a New England farmer who refused to shingle his barn because when the sun shone, the barn didn't need shingles, and when it was raining, he couldn't do it. There is also another similar yarn about a farmer who was killed when a bale of hay fell upon him when the hoisting rope broke. His widow exclaimed, sorrowfully, she just couldn't understand why that rope broke; it hadn't broke in 'nigh onto 15 years!

There are fire departments, and some of them are in New England, that just can't seem to get vitally needed replacements and improvements, no matter how hard they try to get them. In a word, they are trying to get along with 15-year-old rope. There are some city officials who can't "re-shingle" their fire departments—and others who just plumb don't care.

This condition was illustrated by the $300,000 fire on August 4th, in the city of Peabody, Mass., described in this issue of FIRE ENGINEERING. That fire, according to a New England newspaper, "pointed up the need of new fire equipment in Peabody."

It is disclosed that although the city is in process of acquiring new apparatus, "equipment on order" isn't of much use in times of such fires. In short, fire just won't wait!

Months ago Mayor Leo F. McGrath of Peabody proposed to the city council that it pass a bond issue for the purchase of new fire equipment. This was largely at the instigation of Fire Chief Arthur Flynn and other officials, who have for months been urging acceleration in the purchase of new equipment.

The council delayed for several weeks before finally taking action. As a result, it was mid-July before the city advertised for bids. Bids for an estimated $65,000 worth of new equipment were under study when the fire struck. But no orders have as yet been placed, it is reported.

Most of Peabody's present fire apparatus is old. Some of it is considered so obsolete that it has recently been placed out of commission "for an extended period." True, Peabody and its neighboring cities enjoy an excellent mutual aid system, but every forethoughtful fire chief knows he cannot base his reliance to control devastating fire upon facilities owned, and having first call by neighboring fire departments.

Peabody is not alone in this predicament. Nemesis is waiting around the corner to inflict the same sort of retribution on other municipalities that can't, or won't, adequately fortify their fire forces.

Was There a Lesson Here?

The gigantic Missouri and Kansas debacle may have given us another lesson in civil defense, even though missing in the flood was the sudden, violent destruction of an atomic attack. But there are similarities.

High waters knocked out great industrial centers. Communications were cut, transportation crippled. Fire raged out of control in several areas with firemen impotent to extinguish it. Fire forces had to be 'decentralized' as waters rose. Water supplies were cut or curtailed. In many areas potable water was at a premium. Over 165,000 persons were displaced, and thousands are today homeless, as water swept through and over homes. Light and power in many areas were discontinued. Medical and hospital services were jammed with the helpless and the suffering. Roads and highways were blocked by the evacuees, and the morbidly curious.

There was practically no panic. On the contrary, too many citizens refused to take warnings seriously, and were caught as a result. But withal, loss of life was held to an astonishing minimum.

How did this happen? These appear to be the major reasons: (1) An informed public; (2) Preparedness and quick action by public officials, relying on the normal, organized and ready municipal emergency services—fire, police, health and public works; and (3) the spirit of the people of the afflicted area; it's pretty hard to down midwesterners when catastrophe comes!

Press, radio and television in both states made a great effort to alert the public to dangers, and awareness of needs, in disaster areas. This was evidenced in some evacuations. The evacuation of the sprawling North Kansas City, Mo., industrial and residential areas, for example, was ordered about 6 P.M. of a Saturday. By midnight the area was a ghost town, the 4,000 residents gone, and all business and industries closed down. Fire fighters, too, were informed and ready. So were police with radio, sirens and voice amplifiers.

Surely there is a lesson here for civil defense, and all municipal emergency services, in this debacle. An inkling of the lesson for the fire service is told within this issue. Fire chiefs will do well to study this catastrophe and, perhaps, revise their own preparedness plans, for there is no telling where, or when, the next blow will fall!

Fred Shepperd

Washington Firemen Train in Relay Operations

Multiple Pumper Operations Using Heavy Duty Appliances, Including Fog Head Nozzles, Taught District of Columbia Firemen

A SPECIAL REPORT

Editor's Note: **Fire Engineering is indebted to Chief Engineer Joseph H. Mayhew and members of his staff of the District of Columbia Fire Department for this exclusive account of the preparatory training given all members of the department in relay operations and heavy stream appliances.**

"Operations Relay" has also been observed by Metropolitan Washington Civil Defense officials and others, including fire service instructors and fire protection engineers from a wide area.

EACH morning, except when there is inclement weather, two engine companies and one ladder company of the District of Columbia Fire Department, Washington, are placed out of service in order that personnel and apparatus may report to Lieutenant A. M. Peel and Sergeant L. N. Balcom of the D.C.F.D. at the Drillground, beside the Annacostia River.

Actually these units are not entirely out of service for large fires, or where they may be needed, because by means of the two-way radio, with which each unit is equipped, the companies are in touch with Fire Alarm Headquarters. During this period all other radios in the department are turned off in order to keep the air clear.

These pumpers and other units are linked together on the Drillground by means of two walkie-talkie radios and three portable voice amplifiers.

The purpose of this program is to better prepare all members of the District of Columbia Fire Department for appropriate fire control action following an air raid on their city.

This training, known as "Operations Relay," under the direction of Chief Instructor Clarence Quick, gives the fire fighters experience in drafting water from the Anacostia River, east of the Sousa Bridge, and relaying it from one pumping engine to another for great distances. A total of four different pumping engines are used each day, as well as one each of the department's 100 foot aerial ladders.

In the words of Chief Engineer Mayhew, "Although firemen have been relaying water for over twenty-five years, they are now rehearsing the operation so as to be prepared to supply two hose lines simultaneously, and in other cases, to extend the layout so that one pumping engine can supply water through 4,000 feet of hose as part of a civil defense drill in case of atomic attack—which might disrupt normal water supplies."

Special nozzles are tested as part of "Operation Relay." Water is relayed through two 1,200-foot hose lines to supply 500 GPM to a fog head attached to a monitor nozzle.

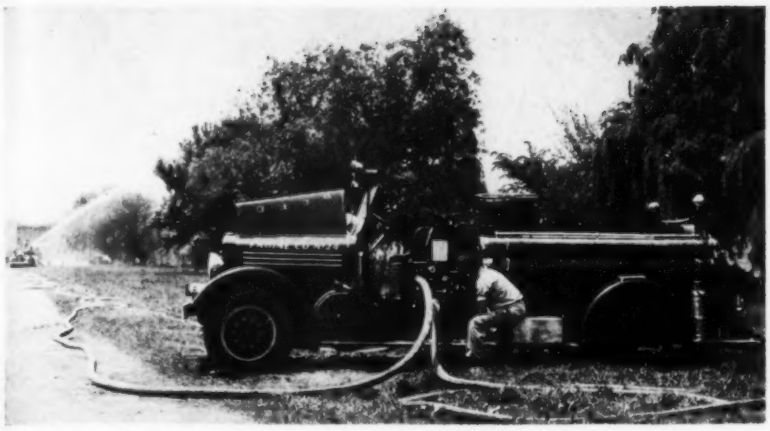
Special nozzles are tested as part of "Operation Relay." Water relayed by four pumpers through 1,200-foot hose lines is siamesed into a length of 3-inch hose to supply a 500 GPM fog head, approimately 45 feet above the ground level.

It should be mentioned at this point that all emergency and static water supplies in and around Washington have been charted. This includes swimming pools, lakes, creeks, river as well as the reservoirs containing water.

Preparatory to "Operations Relay" a manual entitled *"Information on Operational Procedure for Relaying Water"* was written by Lieut. A. M. Peel and Sergt. L. N. Balcom under the direction of Chief Instructor Clarence Quick, after briefing the personnel of each engine company in the District. As a result, there was included in the program for "Operations Relay" instruction on the use of largest size "fog-head nozzles" fitted to various types of heavy duty fire fighting equipment maintained by the District Fire Department.

Foreword on Relay Lines

The manner in which water is relayed for firefighting purposes under ordinary circumstances is outlined in Pump Operating Procedure under "Relaying Water." However, it is felt that some additional procedures would be necessary to relay water long distances in the event that the normal water supply system is disrupted by enemy action. Broken water mains, road blocks, opened up buildings, disrupted communications, all add factors not encountered in the usual fireground



Pump operator advancing the side gasoline throttle to bring the pumps up to the proper pressure to supply 600 GPM through two lines to the wagon. Pipe stream shown in background. Third and fourth pumpers in line are shown.

operations of the Fire Department.

Therefore, it is the purpose of these instructions to establish general procedures for relaying water for firefighting purposes under conditions that might be encountered after an enemy bombing.

Part I is a general procedure for relaying water under the above conditions to supply either hand lines or heavy duty devices.

Part II is a drillground procedure to afford all companies an opportunity to gain experience in relaying water to hand lines and heavy duty devices.

Part I. Procedure for Relaying Water Through Two Lines (2½" Hose)

It is not likely that water will be available from the public water supply system in the event of a bombing, and provisions must be made to relay water a great distance from other sources.

Two basic operations have been established for relaying water through two lines under these conditions; namely, a "300 gpm operation" and a "600 gpm operation."

The 300 gpm operation will be used where the distance between the source of supply and the fire is extremely great. This will supply hand lines using 1⅛ inch or 1¼ inch tips, or two such lines may be used to supply a heavy duty device.

When relaying 300 gpm, the strength of the hose is the limiting factor in determining the distance between pumpers. For this reason, 260 pounds is established as the maximum operating pressure for each pumper.

The 300 gpm shall be relayed through two lines in order to reduce the friction loss. This will permit a greater distance between pumpers and reduce the number of pumpers required for each relayed line. For example, the maximum distance a pump operating at 260 pounds pressure could supply 300 gpm through a single line to another pump would be 1150 feet. By relaying 300 gpm through two lines the friction loss would be reduced to 6 pounds per 100 feet and the maximum distance between pumpers would be increased to 4000 feet.

The 600 gpm operation may be used to supply hand lines or heavy duty devices where the distance between the source of supply and the fire is not prohibitive. It is obvious that when relaying 600 gpm two lines would always be necessary due to the high friction loss of 600 gpm through one line.

The maximum distance between pumpers when relaying 600 gpm through two lines would be determined by the capacity and rating of the pumps used.

The available apparatus, amount of hose on apparatus and in reserve, size of fire, and the distance water must be relayed are all factors in selecting the type of operation to be used.

Layout Procedure

Starting at the source of supply one company, shall lay two parallel lines as far as their hose will reach. The pumper shall return to the source of supply and prepare to get water. The wagon shall be placed in line at the proper distance from the pumper at the source of supply and make connections to relay water through two lines. (Where the wagon is not needed in the relayed line, it will be available to return to quarters for additional hose.)

The second company shall connect their hose to the line of the first company and lay two parallel lines until all of their hose is used or the fire position is reached. The pumper and hose wagon shall be placed in line at the proper place and the proper connections made to relay water through two lines. The intake lines may be connected to separate intakes, or siamesed into one intake.

Each company shall lay all of their hose in a similar manner and place the apparatus in line at the proper place. This layout procedure shall continue until the fire position is reached. The result will be a series of pumps so placed as to relay water through two lines from the source of supply to the fire position.

The distance between each pumper will vary according to the type of operation selected. When the 300 gpm operation is used, the pumpers can be placed 4000 feet apart regardless of the size of the pump since the strength of the hose is the limiting factor. Apparatus not needed in the relayed lines will be available to return to quarters for additional hose.

When the 600 gpm operation is used, the chart on Number of Lines That Can Be Supplied on page 153, Pump Operating Procedure shall be used in calculating the maximum distance between pumpers. Two examples of using this chart to calculate the maximum distance between pumpers are given below:

Example 1. A 750 gpm pumper rated at 150 pounds is located at the source of supply. Two lines have been laid to relay water to a ladder pipe equipped with a 1½ inch tip.

Question: How far from this pump would the next pump be placed in the relayed lines?

The formula for the ladder pipe using a 1½ inch tip is 145 plus 20 therefore the formula for the pumpers in line is 20 plus 20. According to the chart on Number of Lines That Can Be Supplied, this pumper can supply two lines (tips 1⅛" or larger) at pressures under 170

Water is being relayed by four pumpers to supply this powerful wagon pipe stream with water drafted from the Anacostia River. Battalion Chief's car in right foreground.

pounds. The friction loss must be kept under 150 pounds, since 20 pounds pressure is allowed for the intake of the next pump. Allowing 20 pounds per 100 feet for friction loss, the next pumper would be placed 700 feet from the pumper at the source of supply.

If a 750 gpm pumper rated at 150 pounds is last in line, using a formula of 145 plus 20, only 25 pounds pressure would be available for friction loss from the pumper to the siamese at the ladder pipe. Therefore, only 100 feet of hose could be used.

Example 2. A 1000 gpm pumper has been placed in line to relay water through two lines to supply a wagon pipe using a 1½ inch tip.

Question: How far from this pump would the next pumper be placed in the relayed lines?

The formula for the pumper in line is 20 plus 25 (from the plate on the side of the apparatus). According to the chart on Number of Lines That Can Be Supplied, this pumper can supply two lines (tips 1⅛" or larger) at pressures under 250 pounds. The friction loss must be kept under 230 pounds, since 20 pounds pressure is allowed for the intake of the next pumper. Allowing 25 pounds per 100 feet for friction loss, the next pumper would be placed 900 feet from the 1000 gpm pumper.

Part II. Drillground Procedure for Relaying Water

OBJECTIVE: To afford all companies an opportunity to gain experience in relaying water to hand lines and heavy duty devices.

LOCATION OF DRILLGROUND: In Fairlawn Park along the Anacostia River, east of the Sousa Bridge.

EQUIPMENT: Two engine companies, fully equipped.
One truck company, fully equipped.

DESIGNATION OF COMPANIES: For the purpose of identification both on the drillground and in the following instructions, the engine companies selected for drill will be designated "E-1" and "E-2". The hose wagon of "E-1" will be referred to as "E-1W" and the pumper as "E-1P". The hose wagon of "E-2" will be referred to as "E-2W" and the pumper as "E-2P".

Laying Lines

PROCEDURE:

"E-1" shall lay two parallel lines of hose with the hose wagon and pumper starting at the source of supply and continuing for 700 feet. (This simulates the laying of all the hose.) The pumper shall return to the source of supply and prepare to draft water. The wagon shall be placed in line 300 feet from the pumper and proper connections made to relay water through two lines. (This represents the maximum distance that the pumper can supply the required volume of water.)

Starting where "E-1" has stopped, "E-2" shall then lay two parallel lines in the following manner. The wagon shall connect to one line and lay hose for 500 feet. (This represents reaching the fire position.) The wagon shall be placed in line 400 feet from "E-1W" and proper connections made to relay water through two lines. (This represents the maximum distance that "E-1W" can supply the required volume of water.) To simulate blocked streets, or any other reason why the apparatus could not be used to lay hose, the line from "E-2P" shall be laid by hand. "E-2P" shall be placed 100 feet from the fire position facing the fire position. Ladder company personnel shall be used to lay this 400 foot line to the end of the line from "E-1" and make proper connection. A 100 feet of hose shall also be laid by hand to the fire position. Connections shall be made to "E-2P" to relay water through two lines to the monitor nozzle located at the fire position.

The ladder company shall place the aerial truck near the fire position and place the monitor nozzle in service using a small tip (1½ inch or 1⅝ inch).

Relay Problem No. 1

Water shall be ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.

When ordered, pumps shall be shut down in the proper manner.

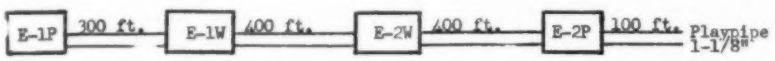
Relay Problem No. 2

The ladder company shall disconnect one line from the monitor nozzle and attach a playpipe equiped with a 1⅛ inch tip.

Water shall be ordered in the proper manner.

The formula for the pumps in line would be 20 plus 6. This formula shall be used for the "300 gpm operation". The formula for the last pump in line would be the regular formula for 1⅛ inch tip; that is, 50 plus 20.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.



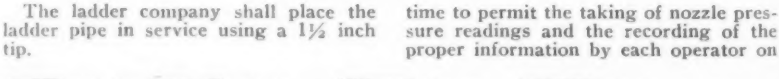
When ordered, pumps shall be shut down in the proper manner.

Relay Problem No. 3

The ladder company shall place the ladder pipe in service using a 1½ inch tip.

Water ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.



When ordered, pumps shall be shut down in the proper manner.

Relay Problem No. 4

E-2P shall go to the source of supply and prepare to draft and relay water through two lines. E-1P shall go to position of E-2W (third pump in line) and make connections to relay water through two lines. E-2W shall be placed within 50 feet of the fire position and the wagon pipe shall be placed in service using a 1½ inch tip.

Water ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure reading and the recording of the proper information by each operator on the form furnished for this purpose.

When ordered, pumps shall be shut down in the proper manner.

Relay Problem No. 5

E-2W shall go to position of E-1W (second pump in line) and make connections to relay water through two lines. E-1W shall be placed within 50 feet of the fire position and the wagon pipe shall be placed in service, using a 1½ inch tip.

Water ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.

When ordered, pumps shall be shut down in the proper manner.

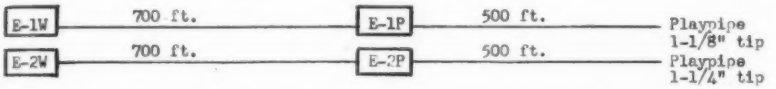
Relay Problem No. 6

E-1W shall go to the source of supply and prepare to draft and relay water through one line to E-1P. E-2W shall go to the source of supply and prepare to draft and relay water through one line to E-2P. (E-1W and E-2W shall connect their respective intake and discharge lines together before going to the draft position.) E-2P shall take position near E-1P and make connections to relay water through one line by taking one intake line and one discharge line from E-1P. The ladder company shall attach playpipes to each of the lines using a 1⅜ inch tip on the line from E-1P and a 1¼ inch tip on the line from E-2P.

Water ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.

When ordered, pumps shall be shut down in the proper manner.



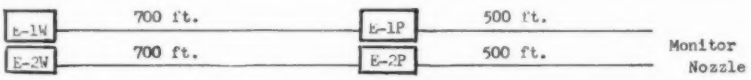
Relay Problem No. 7

The ladder company shall remove playpipes and place the monitor nozzle in service using a small tip (1½ inch or 1⅝ inch).

Water shall be ordered in the proper manner.

Pumps shall be operated at the correct pressure for a sufficient length of time to permit the taking of nozzle pressure readings and the recording of the proper information by each operator on the form furnished for this purpose.

When ordered, pumps shall be shut down in the proper manner.



General Instructions

Companies selected for drill shall report at 9:00 A.M. in Fairlawn Park east of the south end of Sousa Bridge. Final instructions and designation of engine companies will be made at this time.

Communications will be maintained with fire alarm headquarters from the drillground in order that the services of the training units will be available in event of a major fire or other emergency. Apparatus and personnel reporting shall be fully equipped. A minimum of 1200 feet of 2½ inch hose shall be carried by each pumper and hose wagon so that after laying hose lines a sufficient amount of hose will remain to place the company in service.

There will be an allowance of ½ hour at mid-day for lunch. Personnel shall bring their own lunch, since there will be no eating facilities on the drillground

Ladder pipe with 1½-inch tip is being supplied with 600 GPM by four pumping engines relaying water through two lines of 2½-inch hose, 1,200 feet in length.

Sydney Firemen Dodge Death

Shortly before Sydney, N.S.W., fire fighters entered the blazing Postmaster Generals Workshops at Railway Parade Siding, Lidcombe, recently, an explosion blew off the roof of the building. One fireman was injured when a heavy beam fell on his head but all others escaped harm.

The structure, which measured 300 feet by about 150 feet, was well involved by fire when firemen arrived. Witnesses reported a series of explosions spread the flames. In addition to a large quantity of earth-moving and engineering equipment, the structure contained eight trucks and two cars.

When firemen arrived they tried to remove this equipment, but the great heat forced them back, making their streams ineffective. They were further imperiled by exploding bottles of oxygen and tins of carbide.

Damage was estimated at £250,000.

JOSEPH GUNNER

U. S. Extinguishes Mine Fires

More than 120 million tons of coal have been saved by the Bureau of Mines program of extinguishing fires in U. S. coal mines since 1949.

Some of the fires have been burning for a generation.

At current market prices, it is estimated that the coal saved is worth $500 million. The cost to the Federal Government has been about one million dollars, Secretary of the Interior Oscar L. Chapman said.

More important, at this stage of international tensions, is the savings effected in this strategic material, so important to defense and defense supporting activities.

Since Congress authorized the fire control work in the 1949 fiscal year, a total of 21 projects have been undertaken. Many of the fires threatened buildings and lands, and the noxious gases created health hazards.

Fires on public domain were controlled entirely at Federal Government expense. Two-thirds of the expense for controlling fires on private, state and county lands was borne by the Government.

Although the Bureau of Mines selects the fire projects after detailed surveys, the actual work is done by earth-moving contractors on the basis of low bids submitted to the Bureau.

Three methods are used to extinguish the fires.

One method involves spreading a blanket of earth about 10 feet thick over the burning area to exclude oxygen from the fire. Another method is to isolate the fire by digging a trench entirely around it and back-filling the trench with clay.

The method used in deep underground workings is to introduce silt through boreholes.

Missouri River Flood Creates Huge Fire Fighting Problem

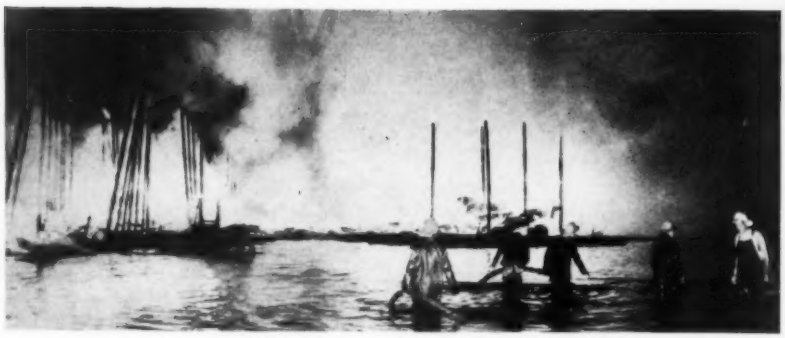
Firemen Forced to Operate in Inundated Areas; Floating Oil Spreads Fire

A STAFF REPORT

Editor's Note: This account of fire fighting operations during the nation's worst flood on record is of necessity limited in scope and detail. At the time this is written, fire chiefs in the affected areas have hardly had time to dig their departments out of the muck, let alone attempt to report on their strenuous activities during the last two weeks in July.

Although some preliminary information has been secured from correspondents, the editors have had to rely upon the most authentic press, radio, television and insurance company reports for the essential details of fire control. Only a later date, when the consolidated reports of Chiefs Harvey L. Baldwin, Kansas City, Mo.; Olander Lind, Kansas City, Kans.; William Cawker of Topeka, Kans., and others are available, will the nation's fire service be able to fuly grasp the magnitude of the problem that swept down upon the fire forces of the flood area as the rising waters themselves started fires, while setting up barriers to their extinguishment.

To those fire fighters who labored tirelessly and unflinchingly during this epocha! emergency, the editors pay tribute.



Firemen move in water up to their hips as they fight fire that destroyed flooded fuel tank depot and lumberyard in Kansas City, Mo., July 14. Burning oil spreads over water in background and lights up charred supports marking site of lumberyard.

DURING the last week of July, 1951, a great flood, characterized as the worst catastrophe to strike the nation, poured a torrent of disaster down the broad Missouri River to engulf two million acres of farmland and cities, towns and villages in its path, leaving a toll of 41 lives lost, 165,000 persons homeless and property losses estimated at fully $1 billion, in which destructive fire played no inconsiderable part.

The story of that flood has been dramatically told in press, radio and television. What has not been told has been the gruelling part played by the fire fighting forces in the area, particularly in the two Kansas Cities, to prevent destruction by fire of the properties in the areas not wrecked by the raging waters.

As warnings of flood waters mounted, calls for help to the fire departments of the endangered cities increased. Fire officials were pressed on the one side for various kinds of aid, from pumping out flooded cellars and helping erect sandbag dikes, to the need of protecting their own properties and equipment against the rising waters.

In Kansas City, Mo., firemen under Chief Harvey Baldwin were pressed into service in an effort to remove water from the water department's vital Turkey Creek pumping station. Here they were marooned by the swollen waters and later rescued by boats. In the same city, a fire company from the station at Seventeenth and Genesee streets, threatened by the rising water, was ordered to the Twenty-Third street viaduct; the crew of the station at Ninth and Mulberry streets was sent to the Intercity span, and two companies from the station at Thirteenth and Liberty streets were moved to the Twelfth street viaduct.

This pattern of evacuation and transfer of fire forces, as the threat of inundation increased, was followed in nearly all the endangered communities in the flood area. In many smaller communities the only fire station was flooded. At the same time, concern was evidenced about the water supply systems which faced shutdown, and contamination.

On July 13th, Francis B. Wornall, fire director of Kansas City, Mo., issued a plea for extreme care with fire in the flood emergency period. He pointed out that while the water supply was sufficient for normal use, inadequate water pressure would handicap firemen in fighting blazes.

Early on July 13th, a fire started in the fuel supplies of the McCall Service Station, Twenty-Fourth and Metropolitan avenue, Kansas City, Kans., an area which was entirely surrounded by rising water. From the service station the fire spread on the waters to involve the Antone Transfer Company, 2415 Metropolitan avenue, where flood waters temporarily confined it. The "blazing waters" first carried the fire to a home at 1510 South Twenty-Fifth street, from which it communicated to the Transfer company.

Hip deep (and sometimes deeper) in

Areas affected by flood shown by shading.

Gasoline burns on water after explosion. Flames from burning gasoline released after an explosion of storage tanks cover the surface of flood water from the Kansas River in an industrial area in Kansas City, Mo., July 13.

the muddy water, Kansas City, Kans., firemen waded into these fires, dragging hose lines behind them. Pumpers took water from hydrants, where available, and from the flood waters, where not. Several effective streams were placed in operation despite the handicaps and the fire was declared under control in about two hours.

Meanwhile, in neighboring Kansas City, Mo., conditions were even more serious. At about 1:15 P.M. the tanks of two oil companies in the area of Southwest boulevard, Thirty-First street and Roanoke road, exploded, sending flames and a towering column of smoke skyward. Twelve hours later the fire was still defying the efforts of eleven fire companies and seventy-five men, aided by more than fifty volunteers. An explosion of a gasoline tank about 1:13 on the morning of the 14th sent fresh flames north of the main fire to threaten other oil and gasoline storage areas. At midnight on the 13th, six large, individual fires were burning, some rekindled by the explosion of a diesel oil tank an hour earlier. By 1:00 A.M. these fires had been reduced to two (except for the new outbreak) and five companies had been sent back to their stations (or to other quarters).

Ten firemen were injured during these long drawn out fire control operations, during which men worked up to their neck in water, from rowboats and from rooftops. Many firemen received duckings, and some injuries, due to the insecure footing.

Flaming gasoline and oil spread over the muddy waters. Flames from some of the blasts roared 500 feet into the air. Said Fire Chief Harvey Baldwin, on the 14th, after 12 hours of work against odds, "The fire has reached such proportions that it would be impossible to determine when we can get it under control, much less get it out."

Buildings destroyed by this fire included the New Holland Machine Co.; Socony-Vacuum office building; Cubine Sheet Metal shop; Last Chance Tavern; Shirk Roofing Co.; another tavern, and the Phillips Petroleum company. Buildings damaged included Battenfield Grease Sand Oil Corp. warehouse; Charles L. Ward Electric Co.

This fire began when a 6,000 gallon crude oil storage tank, torn from its foundation upstream by the Kaw river, drifted against a high tension line and its contents were ignited by a spark. Then the flaming tank floated two blocks in the flood to the Socony-Vacuum office building, which caught fire. The roof fell in at 3:30 P.M., after which the tank and part of its cargo drifted against the 3-story warehouse of the Battenfield Co. Firemen on the roof of this building drove the tank away by pressure from their hose lines only to have it float into a cluster of oil tanks.

In this emergency, three firemen in a rowboat attached a tow line to the burntank but the tank capsized, overturning the rowboat. Another boat took the towline and pulled the wreckage to dry ground where fire crews extinguished the blaze at 4:35 P.M.

One of the men in the overturned boat, Dick Atkins, a fireman of No. 6 Ladder Company, could not swim and floundered hopelessly. The others wore heavy boots which pulled them to the bottom. They got rid of the heavy gear and swam to the surface. One of these men, Bus Jackson, helped Atkins to a floating plank from which he was rescued.

Estimates of the destruction include about twelve tanks, holding 500,000 gallons of gasoline, with the other property already listed. Monetary losses, not yet established, may run over $1 million.

During the excitement at this fire, two employees of the Kansas City Power & Light Co., attempting to cut off a high voltage line, leaped into ten feet of water when flaming gasoline from an exploding tank swept toward them. Weighed with many pounds of tools they sank immediately, but each was able to unfasten his belt and reach the surface where firemen in boats rescued them.

Spectators, who swarmed to the scene, created serious traffic jams, hindering firemen, police and rescuers. At about 5:00 P.M. the fire appeared almost out when three new explosions let more burning flammables loose and rekindled buildings in the area. A tank believed to have gasoline let go at 6:00 P.M., the shock wrenching a hose from the hands of a fireman on the roof of the Battenfeld warehouse. The loose hose was whipped away by its own pressure and struck Fire Captain Roy Potter, knocking him from the 3-story building. He was saved from a serious fall by Chief Baldwin.

Burning fuel from the explosion ignited the Battenfeld building, and firemen were forced to retreat from its roof to the roof of a 1-story extension from which vantage point they extinguished the warehouse fire, after the west half of it was destroyed. They then reoccupied the warehouse roof and directed lines on six burning fuel tanks then in range.

This photo taken over the industrial area of Kansas City, Mo., shows the burned out area, measuring about three-quarters of a square mile (right half of picture), with oil fire still burning. At left is a new fire started by floating oil. Lower left is floating oil from burned out tanks, floating down stream and a threat to lower areas.

Civil Defense Featured at 78th Conference of I.A.F.C.

National, State and Local Levels Covered in Discussions; Anti-Sabotage Methods Outlined

A STAFF REPORT

NEARLY 1,400 registed active, associate and other members of the International Association of Fire Chiefs, their ladies and guests, together with an estimated several hundred others who came for only a part of the Conference and did not register, combined to make the 78th Annual Conference of that Association an outstanding success. They came from almost every state in the nation and from far away places, from Canada, Great Britain, Czechoslovakia, Puerto Rico, Alaska and Japan. Many of their home ports bear odd names like Praha, Czechoslovakia; Flin Flon, Man.; Bad Axe, Temperance, Ishpeming, and Holland, Mich.; Peru, Ind.; Athens, Ga.; Rome, N. Y., and Ga.; Trilby, Ohio; Baton Rouge, La.; Phoebus, Va.; Oshkosh and Wauwatosa, Wis.; Walla Walla, Wash.; Timmins, North Bay, Regina and Kapushaseng, Ontario. But these visitors to Grand Rapids all came with one thought in mind, the business of fire protection and prevention.

In its long life, the International has staged many notable conferences, but none outshone that which kept delegates, visitors and the good folk of "the Furniture City" in a state of anything but calm, from Monday, August 13th, when the vanguard began to arrive, until Friday, the 17th, when the visitors finally cast loose and headed homeward. The 78th Annual Conference will long be a glowing testimonial to those who planned and activated it, particularly the Grand Rapids Fire Department, its genial host Chief Frank Burns, and his staff of officers and men, who did everything they could for the visitors.

Although the Conference was reduced a half-a-day in extent from its predecessors, and although it was advanced two weeks from the customary time and there were other departures of precedent, it made no difference in attendance and in accomplishments in the way of educational, business and entertainment sessions.

Advance registration; preplanned and executed publicity, and multigraphing of all the speakers' papers beforehand and their distribution at the Conference, are only three of the innovations that helped the Association make Conference history, and established a very fine goal for the incoming president, Chief Rudolph Swanson of Jamestown, N. Y., to shoot at.

Grand Rapids had the facilities for such a Conference. Its excellent hotels, restaurants and shops catered to the creature wants of the visitors; the magnificent Civic Auditorium provided amply for the exceptional exhibits and the unusually well-attended business sessions, not to speak of the two vast dinners and the entertainment staged therein. With the officials and members of the Grand Rapids Fire Department, aided by Ed Jagger, and with Chief Al Koltonski of Rutland, Vt., and the staff at the Registration Desk, and handling details, there was system and efficiency.

As customary, the Board of Directors met prior to the Conference to complete details of the meeting, wind up certain year's business and listen to committee reports. President Alderson presided at the session, as he did at the opening meeting of the conference starting at 10 A.M. on the 14th in the Civic Auditorium

The Invocation was given by Lieutenant Colonel Alex Thomas, D.D., of the Salvation Army, after which the colors were posted. The singing of the national anthem was led by Miss Patricia Pyman. Host Chief Frank Burns was introduced by President Alderson, who referred to the Chief's long and honored career.

The address of welcome was delivered by the Hon. Paul G. Goebel, Mayor of Grand Rapids, renowned for his all-American football records. Chief Rudolph Swanson responded for the Association to the Mayor's address, after which the solemnly impressive memorial services were held for the departed members. These ceremonies were directed by Mr. Hy M. Steed with Lt. Col. Alex Thomas, D.D., officiating.

Chief Alderson presided at the Tuesday business session. His accounting of stewardship was brief, and can be condensed in the one word: Progress! He then introduced Chief William Fitzgerald who, as chairman of the I.A.F.C. Committee on Salaries, summarized the findings of his group, following its year-long study. Chief Fitzgerald's report, which covered all paid departments in the various population brackets of the nation, disclosed many inequalities in the amounts paid professional fire fighters. In many areas their wages are considerably below those of comparable public services, such as police. There is a wide range between the low and the high salaries in most of the different brackets. The general impression created by the survey is that the remuneration paid firemen of this country must be brought into line with other comparable services.

Further ideas on the entire salary situation were given by two members of the Los Angeles Fire and Police Departments, Battalion Chief John P. Dick and Police Lieutenant Jack Allen. They told how the fire and police services of their city went after, and secured, what many believe to be enviable wage increases.

Executive Secretary Jay W. Stevens,

I. A. F. C. officers elected for the ensuing year

Left to right: Chief Henry G. Thomas, Hartford, Conn., Second Vice-President; Chief Rudolph H. Swanson, Jamestown, N. Y., President; Chief George R. McAlpine, Oklahoma City, Okla., First Vice-President; Ex-Chief Daniel B Tierney, Arlington, Mass., Secretary-Treasurer.

HIGH POINTS OF 1951 I.A.F.C. CONFERENCE AT GRAND RAPIDS

Registration: **Approximately 1600, including fire officers from Japan, Puerto Rico, Alaska, Great Britain and Canada.**

Technical and Educational Sessions: **Nineteen topics bearing on fire protection were discussed in five sessions.**

Exhibits: **Exhibits exceeded last year's record-breaking display, with total receipts reaching $12,500.**

New Officers: **President, Chief Rudolph H. Swanson, Jamestown, N. Y.; First Vice-President, Chief G. R. McAlpine, Oklahoma City, Okla.; Second Vice-President, Chief Henry G. Thomas, Hartford, Conn.; Secretary-Treasurer, Ex-Chief Daniel B. Tierney, Arlington, Mass.; Executive Secretary, Jay W. Stevens, San Francisco, Cal.**

1952 Convention City: **Boston, Mass., August 25-28 (inclusive).**

1953 Convention City: **Toronto, Ont.**

Chairman of the I.A.F.C.'s country-wide fire prevention committee, brought the delegates to their feet in the concluding moments of the afternoon's session with his impassioned appeal to buy Baby Bonds and "save 4,000 babies' lives this year". Jay's report shows that most of the Association's Divisions are living up to their pledges made to join the crusade being spark-plugged by Jay and the Headquarter's Office of the Association.

Other Tuesday activities included a noon luncheon in honor of Fire Chief Takao Shioya of Japan, a get-acquainted party in the Pantlind Hotel Ballroom, and last but by no means least, the opening of more than 60 booths of fire equipment exhibits in the spacious basement of the Civic Auditorium.

Crosier Heads Michigan State Chiefs

Charles A. Crosier of Battle Creek was elected president of the Michigan State Fire Chiefs' Association at a session preliminary to the International Conference. Other Michigan officers elected were: Vice presidents Ray Hall of Benton Harbor and Philip Eckhout of St. Clair Shores. Frank McKim of Alpena was elected Trustee.

Business Sessions Set Swift Pace

The technical sessions got under way Wednesday morning with Chief Rudolph Swanson presiding. The first speaker was Percy Bugbee, General Manager of the National Fire Protection Association, who decried the lack of interest in fire prevention by women's organizations generally throughout the country. His remarks supplemented a report on the country-wide fire prevention program of the I.A.F.C. launched in June by Jay Stevens, and his group, with the Hon. Herbert Hoover as Honorary Chairman.

"Let it burn" was the advice given the delegates by Chemical Engineer George Russell Webster of the Pyrofax Gas Company, speaking on the subject of "Liquefied Petroleum Gas, its Characteristics and Proper Handling." Once a fire is started in a L.P.G. system, he said, let it burn, if you can't shut off the gas. Mr. Webster reviewed the recent disaster in Newark (FIRE ENGINEERING, August 1951). "All liquefied petroleum gases are heavier than air, he pointed out. They settle down instead of going up. Given time and a place to escape, propane will dissipate itself uniformly but there is danger of reignition until it is dispersed. Don't use an electric fan to disperse the gases, he said, it is too likely to bring along a source of ignition. Better shut off the power, if there are any electrical appliances nearby.

Delegates heard the first comprehensive report of the nationwide hospital inspection program instituted by the National Board of Fire Underwriters from Col. Perrin C. Cochran, vice-president, Phoenix Insurance Company, of Hartford, Ct., and chairman of the Board's committee. Col. Cochran said 85% of the hospitals listed with the American Medical Association had already been checked. He added "However, there are literally hundreds of so-called maternity hospitals, rest homes and such institutions, operated by private individuals, which are not on the National Board's list, but which should be known to fire chiefs. He urged inspection of these places and a constant follow up of the inspections. Although many hospitals have already given heed to the Board's findings, fire chiefs should continue to give thought and serious consideration to the hospital safety problem.

Chief L. Clyde Canning, Chairman of Exhibits, inspects one of the displays at the Grand Rapids Conference of the I. A. F. C.

The Canadian Delegation were present in numbers, as these two groups indicate.

The topic "Jurisdiction of the F.B.I. in National Defense Matters" was handled by Robert D. Cooper, substituting for H. T. O'Connor, also of the F.B.I. He warned fire chiefs to watch for evidences of sabotage in fires they fight. Sabotage may be so carefully planned, he said, that it does not appear to be sabotage at all. Sabotage by fire is one of the most effective means of property destruction. It is the aim of the enemy agent, to stop production, he said. Fire is one excellent way of doing that.

The concluding morning speaker was General Clyde D. Dougherty, Director, Office of Civil Defense, Detroit, Mich., who recounted the trials and tribulations encountered by that city in building up adequate defense, fire protection included. Local papers have reportedly been critical of that city's defense measures, as they have generally criticized failures in civil defense throughout the nation, it is disclosed.

A tour of Grand Rapids, concluding with a picnic for the ladies of the convention, was highly successful despite a downpour. The enjoyable picnic repast was prepared entirely by Grand Rapids fire fighters.

In Wednesday's technical sessions Michigan's Fire Marshal, Arnold Renner cited the vulnerability of American cities to enemy attack, pointing to the heavy use of wood construction. He was optimistic in describing Michigan's civil defense measures. Civil defense demands that the state's industrial production must be kept rolling at all costs.

Robert L. Applegate, Asst. Chief Office of Industrial Security, Munitions Board, Washington, D. C., warned chiefs of their essential role in the "Protection of Vital Defense Industries". He said J. Edgar Hoover of the F.B.I. reports there are 43,217 Communists in the United States with New York having the largest number and California, the next largest. He outlined the responsibilities for defense measures incurred by plant management, by local and state government agencies and at the federal level. He cited a special role for the fire chief, that of essential protection beyond the boundaries of the industrial plant—"the power facilities that serve it, the rail and trucking transportation facilities, the telephones, water supply, the homes of the individual workers and the many services upon which they must depend; stores, hospitals, churches, all of which adds up to the whole community." "The department of Defense," he said, "places the highest dependency for a highly essential task upon you fire chiefs."

P. M. Schuchart, Chief, Fire Communications Branch, Federal Civil Defense Administration, also of Washington, discussed "Civil Defense Warning and Communications". He outlined to the chiefs the elements of the attack warning system for the approach of enemy aircraft, claiming that should an attack occur, from 70 to 90 per cent of the enemy air fleet would reach their destinations within the country despite our well-trained air defense forces. Fire chiefs are primary factors in civil defense, he said.

The "Fire and Life Hazards of Atomic Bombing" were outlined by Francis L. Brannigan, Asst. Chief, Fire and Accident Branch, New York Operations Office, U.S. Atomic Energy Commission. Mr. Brannigan had no new panaceas for meeting atomic attacks, but debunked some of the rather wild rumors and alarms that have been broadcast about radioactive contamination and other after effects of atomic bombing.

John P. Redmond, President, International Association of Fire Fighters, Washington, D. C., praised the nation's fire service as an example of unified cooperation of professional, commercial and labor organizations all working for a common cause, fire prevention. He commended the I.A.F.C.'s drive to reduce the number of fatalities by fire and pledged his organization's support.

The evening was given over to a "Dutch Party" at the Civic Auditorium, at which following a delightful supper, the visitors were thrilled by the twenty-four folk dancers of the Holland, Michigan, festival group.

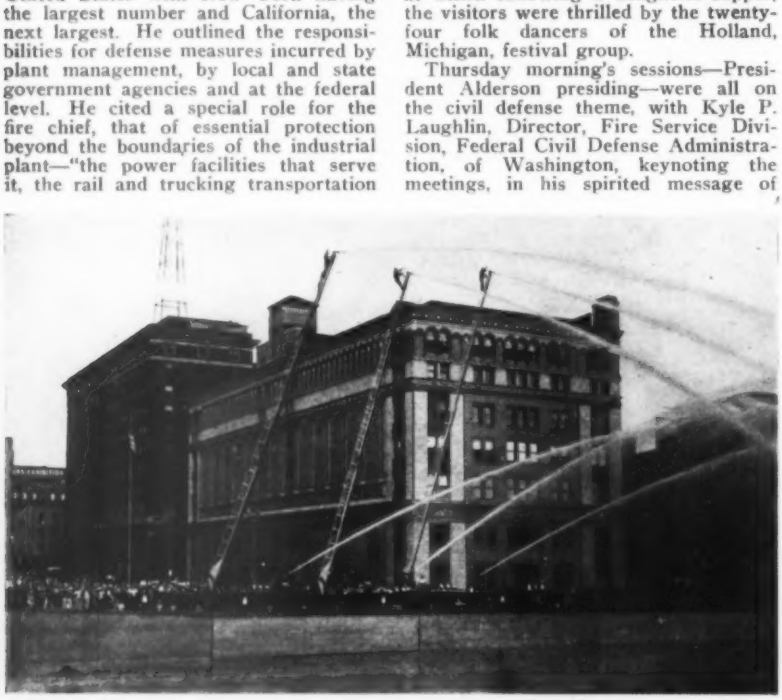
Thursday morning's sessions—President Alderson presiding—were all on the civil defense theme, with Kyle P. Laughlin, Director, Fire Service Division, Federal Civil Defense Administration, of Washington, keynoting the meetings, in his spirited message of "Civil Defense at the Federal Level." Mr. Laughlin placed emphasis on the need of homeowners themselves helping to put out fires in the perimeters around the area of complete destruction, following an attack. Small fires can be extinguished with the simplest of fire fighting tools he said. People needed only "instruction in basic methods of fire fighting" plus "will and determination." He spoke of a government manual "Fire Fighting for Householders" from which all technicalities have been removed to make it as easily read and understood as possible. He paid the nation's fire forces a compliment but called American cities "very combustible."

Chief Frank Burns, adorned by a Japanese jacket, participates in the dance at the "Get Acquainted Party" in the Pantlind Hotel ballroom on Tuesday evening of the convention.

Mr. Laughlin said strategy for fire defense must be based upon four major provisions (1) redistribution of fire companies around a city to minimize the danger of their destruction; (2) mutual aid, both within a community and from outside a critical area; (3) auxiliary water supplies and (4) increased fire equipment. Federal, financial aid, he said, "hinged entirely on the support it is given by Congress."

Canada's Plan for Civil Defense was explained by General F. F. Worthington, Civil Defense Coordinator, Department of National Health and Welfare, Ottawa, Ont. General Worthington emphasized the defensive relationships between the two countries, and the importance of setting up adequate fire defense measures. Canada also has its difficulties in financing its civil defense program, it was disclosed.

Chief Herbert A. Friede, Superintendent of Communications, District of Columbia, and president of the Eastern Division, I.A.F.C., took for his topic "Air Raid Warning Signals vs. Fire Apparatus Sirens". He decried the thinking which suggests removing the siren as the established warning signal on fire apparatus and other emergency



Delegates to the Conference witnessed an impressive demonstration by the Grand Rapids Fire Department. Three ladder pipes and three deck guns on aerial ladders, lined up along concrete abutment of the Grand River, discharge their streams into the river.

Left: Chief Herbert A. Friede, Director from the Eastern Division, I. A. F. C., addresses the Conference on air raid warning systems, while Former President Charles A. Delaney (at left) listens attentively. Right: Percy Bugbee, General Manager, N. F. P. A., at the rostrum with Kyle P. Laughlin, Director, Fire Service Division, Federal Civil Defense Administration, standing by (at right).

vehicles. Firemen want to keep their sirens, he insisted, and they should be allowed to do so. It is possible he maintained, to install a type of air raid warning signal that will not conflict with fire apparatus sirens.

Matthew M. Braidech, Director of Research, National Board of Fire Underwriters, New York, and chairman of the I.A.F.C.'s Committee on Radiological Hazards in Fire Fighting, enlightened the delegates on the study made by his group of the problem of radiation hazards which might be presented in peacetime research and industry through the handling or storage of radioactive isotopes, as well as the hazards to the fire service in fighting fires wherein such storages are involved. He urged proper and prompt monitoring by fire fighters; education of the fire forces in the entire problem of radioactive contamination, and in monitoring operations. Mr. Braidech also urged that key representatives of the fire service be included in radiological defensive training programs.

The technical session resumed in the afternoon with a paper by Chief Roi B. Woolley, Assistant Editorial Director, FIRE ENGINEERING, in which he described the various new developments of alerting and summoning volunteer firemen. The telephone is generally unreliable as an instrument for fire alarm communications, Chief Woolley said, particularly decrying the party-line phone system. Radio appears to offer the greatest opportunity for alerting volunteers, particularly in areas where wire facilities are not feasible, he said.

A. L. Thornton, Chief, Protective Equipment Branch, National Production Authority, Washington, discussed the "Controlled Materials Plan of the N.P.A. as it affects fire apparatus and fire equipment. Materials for fire apparatus are going to get priorities he said.

At the conclusion of the technical session there was a brief business meeting at which the selection of City of Boston was confirmed as the location of the 1952 Conference. Immediately following this meeting, delegates and visitors witnessed an outdoor exhibition by units of the Grand Rapids Fire Department directed by District Chief Ernest Esbaugh. Three 100-foot aerial ladders were extended and men operated streams from ladder pipes and turrets mounted on the trucks, with a total delivery of 4,800 gallons per minute.

Combining the annual banquet, held Thursday evening, with the installation of officers, marked a departure from custom. The banquet, held in the Civic Auditorium, and attended by over 1,000 delegates and guests, was the most colorful event of the Conference. President John Alderson presided and personally installed the officers for the coming year. They are: President, Chief Rudolph H. Swanson of Jamestown, New York; first vice-president, Chief George R. McAlpine of Oklahoma City; second vice-president, Chief Henry G. Thomas of Hartford, Conn. Chief Daniel B. Tierney of Arlington, Mass., was previously re-elected to serve again in that post. Chief Jay Stevens of San Francisco, was also again appointed Executive secretary.

Chief Alderson introduced Chief Frank Burns, host chief of the Conference, his wife, and various other officials of the Association and the Conference, as well as local civic officials. Chief Burns in turn introduced Mayor Paul G. Goebel, who delivered the principal address of the evening. During the ceremonies beautiful floral tributes were presented to Mrs. Burns and Mrs. Swanson. This year, again, the wife of the host chief was presented with a magnificent hand-worked comforter made by Mrs. L. C. Canning of Midvale, Utah, wife of Chief

Fire Buffs, and guests, get together at a special luncheon.

Left: This is news! The photographer is photographed! Hubert Walker, second from left in front row, joins a jovial group to pose for a picture. Hugh, who took most of the conference pictures reproduced in this issue, permits Roi Woolley, Assistant Editorial Director of FIRE ENGINEERING, to take one of the photographer. Right: A Missouri Valley group joins the festivities in one of the several "Open House" parties held during the conference.

Canning, Chairman of the I.A.F.C. Exhibit Committee—which, incidentally did a record-breaking job!

Chief and Mrs. Frank H. Burns of Grand Rapids, Mich.

One would have to travel a long way to find a team more efficient in handling a big convention than Frank and his able wife. They proved the ideal host and hostess.

In the name of the Association, Vice President McAlpine presented to outgoing president Alderson a diamond ring. In receiving this, President Alderson thanked the Association and said this ring with one he had received from the Pacific Coast Association of Fire Chiefs and one from the Los Angeles Fire Department would go to his grandchildren. In a few simple words he wished the new administration a successful year, and pledged his continued active support of the Association in its endeavors.

Following the brief business session and presentations, and the drawing for prizes, the balance of the evening was given over to outstanding entertainment furnished by a large cast of performers.

On Friday morning the Board of Directors met at the Hotel Pantlind to discuss the tentative plans for the coming year.

Acknowledgement

The pictures which accompany the report of the Grand Rapids Conference of the International Association of Fire Chief were taken by Hugh Walker, Manager of Motor Fire Apparatus Sales Engineering, American-LaFrance-Foamite Corporation, Elmira, N. Y. The Editors extend to Hugh their thanks for this material contribution to the report.

Convention Notes

For the first time in its seventy-eight years of existence, the International Association of Fire Chiefs has voted to incorporate. Necessary steps to accomplish incorporation will be taken at once.

* * *

For the second time in a row, Chief L. Clyde Canning, Chairman of Exhibits, has set a new record in the number, and revenue from, exhibits at an I.A.F.C. Conference. Last year at San Francisco a new high was reached, but this was surpassed at the Grand Rapids meeting. Good work, Clyde!

* * *

For one of the smoothest running conferences ever held by the I.A.F.C., no little credit is due to Chief Frank Burns, of Grand Rapids, the genial and efficient host this year. Though under tremendous pressure during the week that he entertained the 1600 guests, he remained calm and saw to it that each feature was run off on schedule. Despite the fact that he labored under restrictions in raising funds for staging the Conference, he put on a convention that must be classed with the best ever held by the Association.

* * *

President John Alderson proved a past master in conducting meetings, whether of the Conference or the Board of Directors. His full knowledge of parliamentary procedure was evident in the manner in which he piloted each session to conclusion without permitting departure from the business at hand.

* * *

A change in the Constitution, voted by the Association, which permits the Board of Directors to select the conference city, will prove highly beneficial to the organization. Now a city can be selected sufficiently far in advance to make possible the choice of desirable dates for the meeting. Such early selection will also help the local Chief and his conference committee to do a better job.

* * *

Five resolutions were adopted by the Association at the Grand Rapids Conference. In substance, they were as follows:

1. A protest against the requirement that a tone signal, or "beep," must be used when telephoned alarms are being recorded.

2. Protesting against proposed changes in present F. C. D. A. specifications for fire apparatus to be purchased for Civil Defense use.

3. Commending the National Board of Fire Underwriters in their hospital survey, and pledging the Association's cooperation in this work.

STATEMENT BY PRESIDENT SWANSON

Speaking to a representative of Fire Engineering, following his election to the presidency of the Association, Chief Rudolph Swanson said: It is a bit early for me to put forth any program for the coming year. However, I can say that a number of important matters for the advancement of the Association were discussed at the post-conference meeting of the Board. I shall take these recommendations under advisement. Meanwhile, I intend to make every effort to further the following:

1—Continue to cement the friendly relations between the Divisions of the Association.

2—Carry forward the excellent fire prevention work of Jay Stevens and his group, headed by former President Herbert Hoover, to save those 4,000 lives of babies lost annually in this country and Canada through fire.

3—Push for the recommendations made in the splendid report of the Committee on Firemen's salaries, Chief William Fitzgerald, chairman. In this connection I shall send a representative of the Association to the Mayors' Conference, the City Managers' Conference, and the American Municipal Association meeting.

4—Continue to drive for improved fire service communications with emphasis on broader use of modern radio in all its forms, including its application to mutual aid operations.

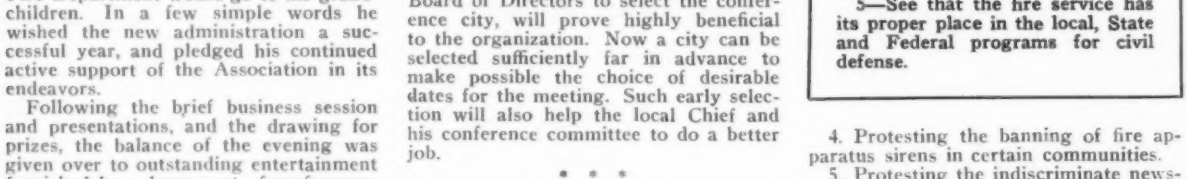
5—See that the fire service has its proper place in the local, State and Federal programs for civil defense.

4. Protesting the banning of fire apparatus sirens in certain communities.

5. Protesting the indiscriminate newscasting of fires or other catastrophes, resulting in the mass movement of people and motor vehicles toward the scene, blocking of highways and otherwise interfering with the work of fire fighting and other emergency activities.

Dominion to Meet with I.A.F.C.

The decision has been reached to hold the 1953 conferences of the International Association of Fire Chiefs and the Dominion Association of Fire Chiefs jointly in Toronto, Ont., Canada, on September 14 to 18 inclusive.



Delegates to the Seventy-Eighth Conference of the I.A.F.C. in front of the Pantlind Hotel.

Fire Service Ladders and Their Use—Part XVI

Ladder Evolutions: Simple One-Man Raise – Short Extension Ladder

By ROI B. WOOLLEY

Editor's Note: **This Chapter begins the series on ladder evolutions, starting with one man operations. Much of the success of this and later installments is due to the cooperation of the Committee on Firemen's Training, National Fire Protection Association, and the Joint Committee on Evolutions of the Fire Department Instructor's Conference, through its enterprising Chairman, Richard E. Vernor, Western Actuarial Bureau, for permission to use the excellent photographs depicting the various evolutions, which were taken by H. F. Rothery, Photographer, District of Columbia Fire Department. Many of these photographs will be recognized in the pictorial training manual "Handling Hose and Ladders" published by the National Fire Protection Association, 60 Batterymarch St., Boston Mass.**

Acknowledgment is also made to the many members of the International Association of Fire Chiefs who have patiently assisted the author in the effort to reduce these various ladder evolutions to the simplest terms and to settle, it is hoped for all time, the few controversial laddering operations that have no plagued the fire service in the past.

Readers will find it advantageous to review this installment together with Part XV in the August, 1951, issue, which discusses handling, carrying and climbing ladders, and Part XI, on the placement of ladders.

WE begin our evolutions with one of the simplest of raises: the one man operation using a short extension ladder.

The beam ladder has been removed from the apparatus and taken to the point of raising. It has been placed (Fig. 1) with the fly underneath. Actually, in the one-man pickup and raise, it matters little whether the fly be under or above the main section in this operation.

Man faces the tip of the ladder with right hand on rung below the center of ladder. Hand grasps rung in its center with palm of hand toward top of ladder. Note that the ladder illustrated has a permanent marking indicating the center of the beam of the main ladder section. This "short cut" is adopted by many departments to facilitate identifying the center of that section of an extension ladder. It also facilitates the tying of ropes for lifting, and other operations.[1]

[1]It is customary in many fire departments to paint the butt ends of main ladders black and the tip ends of all ladders white. The only way the ladder shown in the illustration can be quickly identified is by the butt, or heel plates on the bottom of the main section. The man is facing toward the top of the ladder in this picture.

Fig. 2 illustrates the pickup. As the man picks up the ladder, he pivots on his right foot to the right, his left hand extending through the rungs, while the right hand maintains a firm hold on the original rung. This leaves the left hand free to graps the rung below that held by the right hand, as the ladder is placed on the left shoulder, with the man facing in the opposite direction than shown in Fig. 1.

Fig. 3 shows left arm completely through ladder, with beam resting on man's left shoulder. The right hand,

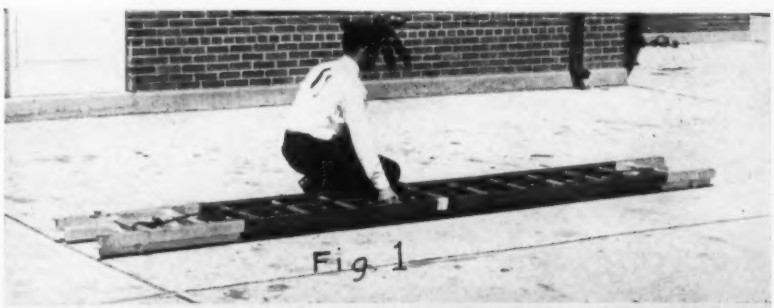


Fig. 1

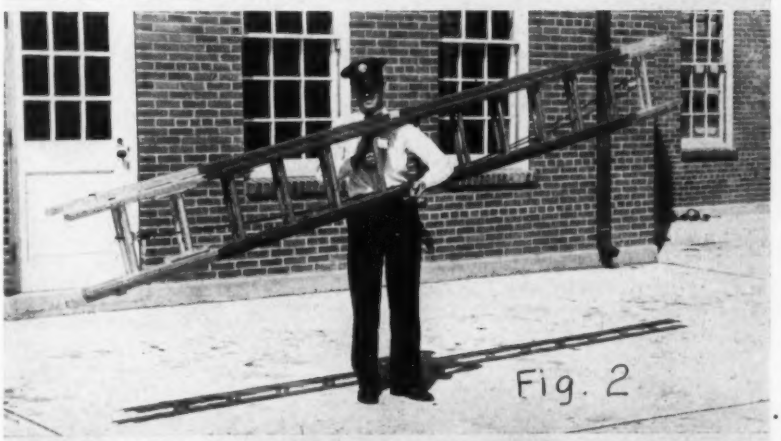


Fig. 2

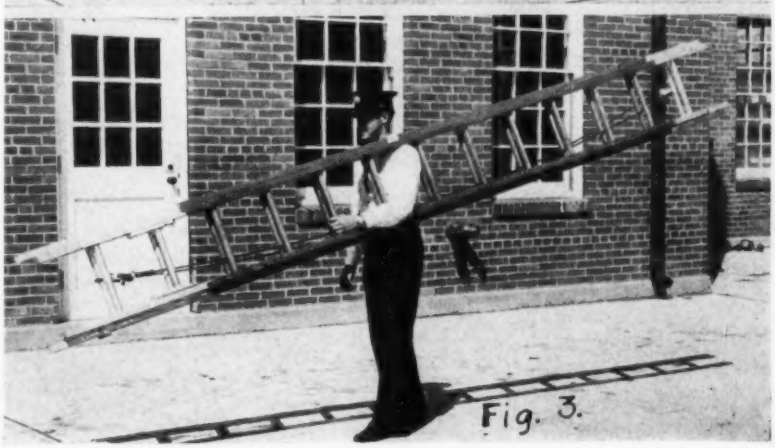


Fig. 3.

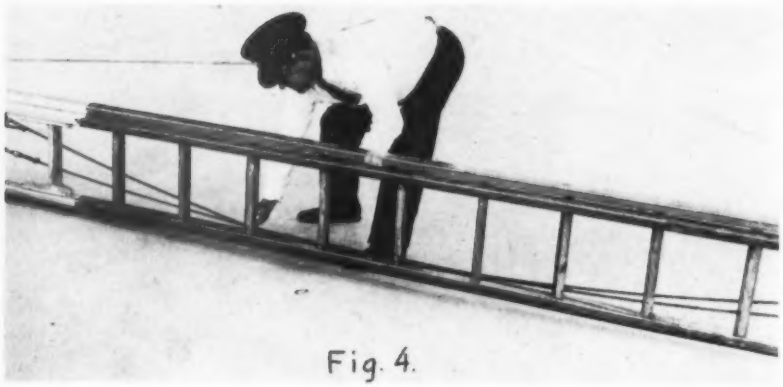


Fig. 4.

which has done most of the heavy work in lifting (Fig. 1), is now free, the ladder being balanced on the shoulder, with the heel, or butt dropped somewhat from the horizontal. Note the dead center of the ladder is just forward of the man's shoulder, as indicated by the marker on the upper beam.

In this position the ladder is sufficiently clear of the ground to prevent the heel, or butt, striking low obstructions, yet sufficiently below the height of the average person to prevent face or head injuries in the event of collision with a another fireman, or other adult.

Another variation of the pickup of a short ladder is illustrated in Figs. 4 and 5. In this method, the ladder is raised from flat position to rest on one beam. The raiser grasps the second rung from the center of ladder with his right hand and the first rung from the center with his left hand. He then lifts the upper section of the ladder from the ground as shown in Fig. 5, after which the ladder is shifted on the shoulder, the left arm brought through the rungs and the right arm swung free, as in Fig. 3.

In Position to Raise Ladder

Before reviewing the next sequence of evolutions, which are concerned with the one-man raising of the short extension ladder, a brief explanation is due.

The entire following sequence of steps in this one-man raise is predicated upon the placement of the fly of the short extension ladder *under* the main section, or *toward* the building. That is the way this sequence was originally photographed and published.

However, despite this fact, the author, and other members of the Committee on Firemen's Training took issue with this evolution, just as they did with certain other ladder raises where the fly was placed toward the building, or under the main section.

The question of placement of ladder fly has been discussed in Part XV of this series and it is unnecessary to again review the matter here. The point should be made, however for the record, that although there are valid reasons why *some trussed* extension ladders should always be raised with the fly *under*, or *toward* the building, and there are some types and makes of ladders that should be raised with the fly *over*, or *away* from the building (there is also at least one make of trussed ladder which permits either procedure), it is a very different story with *beam* extension ladders.

Investigations conducted by this Journal and the writer, over a period of years, attest these facts: (1) Fire departments that set beam extension ladders with the fly *over*, or *away* from the building greatly predominate in every part of the country. (2 Practically all commercial users of ladders, including safety engineers, painters and riggers, place beam extension ladders with the fly *over* or *away* from the building.

For these and other reasons, the author recommends raising the short beam extension ladder (up to 28 ft.) whether one man or two man operation, with the fly *over*, or *away* from the building. Although this is not in agree-

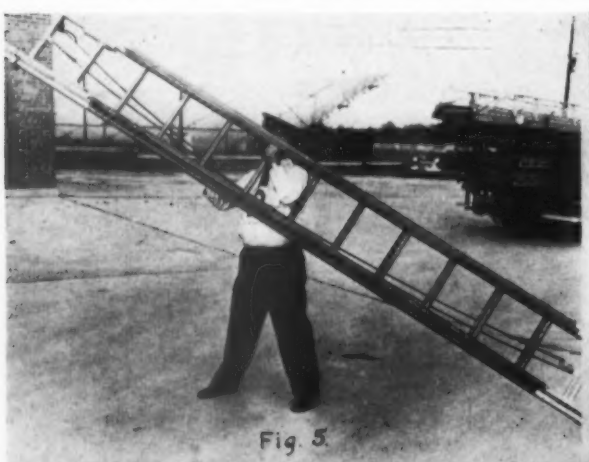


Fig. 5.

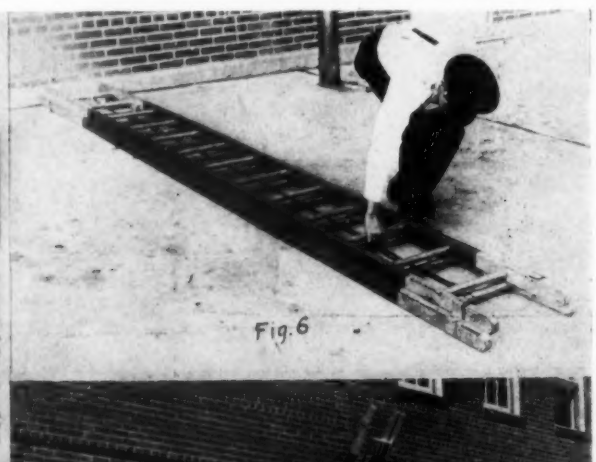


Fig. 6

Fig. 7

Fig. 8

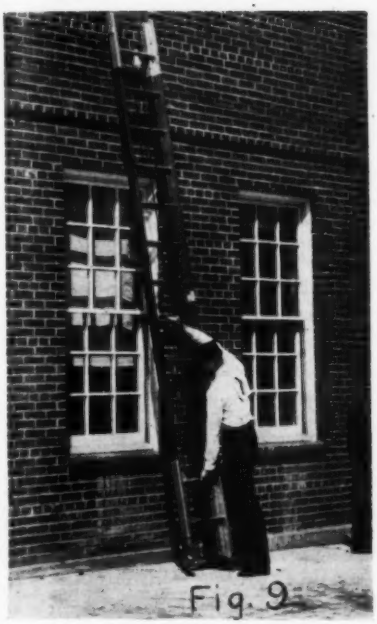


Fig. 9

ment with the photographs used (Figs. 6-8) in this chapter the actual manual operation of raising and setting this type of the ladder is practically the same, for either method of raises.

Fig. 6 shows man in position to raise the beam extension ladder. The ladder is placed with heel or butt against the building (or some other suitable obstruction). Where the fly is to be brought to the outside, and raised away from the building, the ladder illustrated should be reversed, with fly below. Or, the ladder may be raised in this position and pivoted after being raised.

The raiser grasps the third rung from the top with right hand, palm of hand toward the heel, one foot slightly ahead of the other, and left hand on the left knee. The grip is on the center of the rung. Any other hold may swing the ladder out of balance in the next operation of lifting, as shown in Fig. 7.

The raiser then pivots under the ladder as it is raised, the left hand coming around to grasp a rung higher up.

Raising of the ladder to vertical position is shown in Fig. 8. The raiser places hands on rungs, taking a firm grip of each. Raising by means of hands on beams is considered poor practice as it may throw the ladder completely out of balance. Strong men may want to grasp every other rung and heave up but the one-rung-at-a-time method makes for less strain and for smoother operation.

The next step is to move the butt or heel of the ladder out from the building preparatory to raising the fly section (Fig. 9). The distance the heel is moved out depends upon whether the fly is to be raised under—toward the building, or out and away from it. The argument has been advanced that by having the halyard on the *outside* i.e.: away from the building, the raiser can better watch the tip of the ladder as he elevates it and thus better estimate the correct height for placement. This has some merit, but in a one man raise, with the necessity of securing the bottom of the ladder with a knee brace (Fig. 11) the raiser must maintain an almost vertical pull on the halyard. Any movement of the halyard *at right* angles to the perpendicular may pull the ladder *away* from the building, and the raiser, with disastrous results. In the position shown in Figs. 9-10 the pull is *away* from the building, whereas, when the fly ladder is raised on the *outside* or *away* from the building the halyard and operator are *under* the ladder, or *between it and the building*. True, it is possible in this position, looking upward, the operator cannot as accurately judge the height of the fly ladder as when on the outside, away from the building but this is hardly as important, many believe, as the greater safety in the fly-outside-method, where if the ladder should get away it has only a short distance to go before being supported by the building. Furthermore many instructors maintain that all ladder users should be able to gauge the height of the fly ladder not by watching the *tip*, necessarily, but by checking on the number of rungs in the

Fig. 10

fly ladder left in the main section, as the fly is raised.

Fig. 10 shows the ladder in position for raising the fly with operator and halyard on the *outside*, away from the building. In this raise, the weight of the ladder should be resting against the halyard; in other words, the ladder should slant slightly off the perpendicular, or *toward* the building. The butt or heel for this size ladder and this operation should be out about 18 to 20 inches from the wall. It should be somewhat further out when the operator raises the ladder with fly *away* from the building. Fig. 11 shows a sectional closeup of Fig. 10 to indicate how both hands are placed on the halyard, with the first rung of the ladder against the raiser's leg to prevent the heel slipping. Note: With the raiser operating the halyard slightly "off-center" as shown in this and Fig. 10, there is a tendency to pull the ladder to the right. This can be countered by bringing the halyard to the left.

The next step is to secure the halyard, as shown in Fig. 12. There are a number of ties for securing the ladder halyard. The one shown is a bowknot tied above the third run, after a bight of the halyard has been taken under and up from the second rung. A bowknot is considered more practical than a close or other hitch, or knot, because it is more quickly released. There should not be much strain on a ladder halyard

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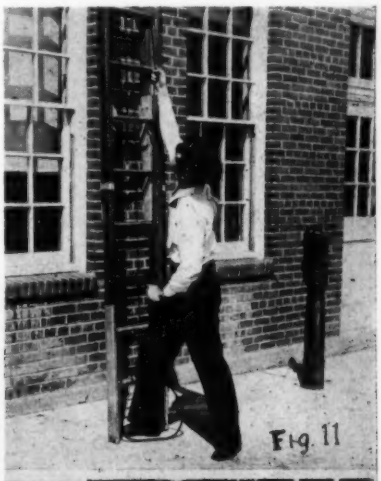
Fig. 11

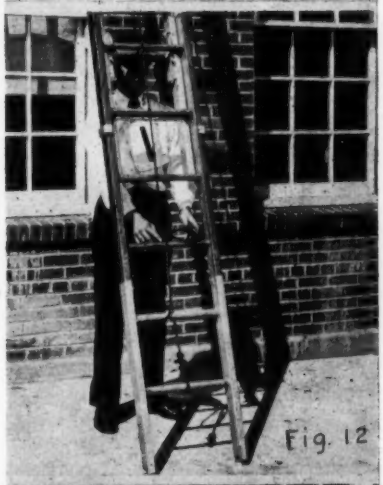
Fig. 12

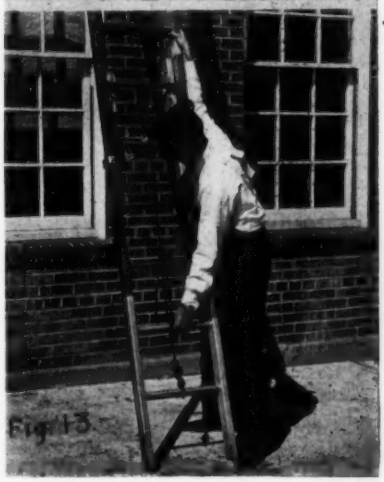
Fig. 13

DOMINION CHIEFS' CONFERENCE ESTABLISHES NEW RECORDS

Business and Social Problems Reach New High Levels at London, Ont., August Gathering

CANADIAN fire chiefs who have attended conferences of the Dominion Association of Fire Chiefs for many years characterize the recent 42nd Annual Conference of the Association "the best ever." Although registered attendance of fire chiefs, their ladies and friends was approximately 400, the total attendance at the two banquets exceeded 500 each. The exhibit space in the Hotel London, conference headquarters, was all occupied. Attendance at business sessions, likewise, taxed the capacity of the meeting hall. And, as usual with Dominion Association meetings, the entertainment was lavish.

Major General F. F. Worthington, C.B., M.M., Civil Defence Coordinator for Canada.

Registration began on Sunday, August 19, but the conference formally started on Monday, the 20th, with the invocation by Rev. Father J. L. Hennessy. Civic welcome to the delegates was extended by Alderman Gordon Gilbride, chairman of City Council's fire committee, in the absence of Mayor Allen J. Rush.

London's Fire Chief R. C. McRonald, this year's host to the Conference, also welcomed the visitors, paying a tribute to the members of the London Fire Department, City Council and local citizens for their aid in perfecting the conference preparations.

Chief W. H. Short of Lethbridge, Alta., president of the Association, presided and joined in welcoming the delegates and guests. The welcoming sentiments were acknowledged in a brief speech by Chief Secord Robinson, first-vice-president of the organization.

Highlight of the first day was the solemn ceremony in tribute to the Association members who had died since the 1950 Victoria, B. C. conference. Names of the deceased were read by Vice-president Chief C. G. Burnett, of Ottawa. They included Ex-Chief Charles Scott of London; chiefs in Three Rivers, Quebec; Preston; Toronto; Wayburn, Alta.; Moose Jaw, Sask; and the four fire fighters who died fighting a blaze in Peterboro.

The Rev. Angus J. MacQueen, of London, in the memorial address, paid tribute to fire department members whose work "largely goes unhonored and unsung." Too few people, realized, he noted, that their protection and safety were bought at a great price.

In his report on the progress of the Association, President Short urged fullest possible support of the drive undertaken by the International Association of Fire Chiefs to save the lives of 4,000 children in North America from destructive fire.

Chief Allen H. Clark, secretary-treasurer of the organization reported the membership and Association revenue growing steadily. At a later meeting, Chief Clark who has held his executive post for many years, was presented with a beautiful set of metal wrought book ends, appropriately inscribed, which were made by London fire fighters and presented by Chief MacRonald.

The first evening session was marked by the showing of many of the latest motion pictures of fire fighting, from the library of movies of the Ontario Fire Marshal's office.

Swanson Speaks on Cooperation

Following a brief organization business session on Tuesday morning, the conference got under way in earnest with an address by Chief Rudolph H. Swanson, newly elected president of the International Association of Fire Chiefs. Chief Swanson took for his topic "International Cooperation" and urged the Dominion fire fighters to cooperate with their brother firemen in the States, and with the other regional bodies of the I.A.F.C. on all measures that would advance fire protection and fire prevention—as well as the best interests of firemen themselves. The very foundation of the fire service is cooperation, he said. Firemen must work together in the control of fire, as well as in the furtherance of the fire service itself.

Chief Rudolph H. Swanson, President, I.A.F.C., speaking on "International Cooperation."

A representative of the Aquadyne Corp. delivered the paper on "wet water," originally scheduled by G. P. Havenor vice-president of that company. Following the address, many questions were fired at the speaker by the interested delegates, about 50 per cent of whom, it was said, are now using this extinguishing agent.

Changes in the program necessitated switching speakers and topics somewhat during the conference but the following subjects were covered:

"Radio and its use in fire department Operations" was discussed by M. C. Patterson, B.F., B.S.A.C. of Rogers Majestic Electronics, who urged that the fire service operate on its own radio frequencies apart from police or other services; "Winning Fire Prevention Week" by Chief W. P. Donahue of Sherbrooke, Que.; "New Fire Problems" by Horatio Bond, chief engineer N.F.

(*Continued on page* 788)

Officers for the Coming Year in the Dominion Association of Fire Chiefs

Front row (left to right): First Vice-President, Chief G. Burnett, Ottawa, Ont.; President, Chief Secord Robinson, Kapuskaming, Ont.; Second Vice-President, Chief F. Premont, Arvida, P. Q., Rear: Immediate Past President, Chief W. H. Short, Lethbridge, Alta., and Secretary-Treasurer, Chief Allan Clark, Lakefield, Ont.

PROMPT MUTUAL AID PREVENTS POSSIBLE PEABODY CONFLAGRATION

Four Hour Struggle Made Difficult by Loss of Communications and Falling Wires

A Staff Report

THE heart of the business district of Peabody, Mass., was endangered on August 4 when fire, whipped by a strong wind, destroyed a grain warehouse, a leather tannery and badly damaged two other structures, causing loss estimated at $300,000.

The general alarm fire, which is being investigated by the state fire marshal's office, was only prevented from wiping out the entire tannery section of the city, as it is termed, by the efforts of fire fighters from six communities and the local department directed by Deputy Chief Timothy B. Roche in the absence of Fire Chief Arthur C. Flynn, on vacation.

Buildings totally destroyed were the combustible 100-year old 2½-story frame structure of the M. H. Ellis Grain Co., 19 Walnut st. which was stocked with $80,000 worth of grain and, the 3-story brick and wood leather plant of the Selwin Leather Co., Inc., 17 Walnut st. which contained leather and machinery valued at more than $85,000. Those damaged included the 3-story brick and joist Korn Leather Co., across the street from the burned buildings, and a two-story frame dwelling in the rear of the grain warehouse. Severe exposures included the J. F. Burnett Boiler Works in the rear of 21 Walnut st.; the Fermon Leather Co., Inc., 13 Walnut st., and the Nathan Goldstein meat market at 21 Walnut.

Official records at Peabody fire headquarters show the first alarm was received at 5:58 A.M. by telephone from an unidentified person. Simultaneously, Box 42, corner Walnut and Wallis streets was recorded, followed in quick succession by four other alarms.

The crew of Engine 1, first company to reach the scene, found the grain building "full of flames." Men stretched lines to the east of the building. The members of Engine 4, next to arrive, also attacked from the east of the burning building, while the men of Engine 3 and Ladder 2 went to work on the west side. The pumper from South Peabody stretched to the rear of the burning structure.

Second and third alarms were sounded by Deputy Fire Chief Timothy B. Roche immediately, almost as radiated heat from the grain warehouse drove firemen from their positions, necessitating the abandonment of a hydrant directly in front of the Ellis building. Before the second alarm had finished sounding, Chief Roche ordered out-of-town aid called.

Fed by the highly combustible contents, and construction, the flames leaped high in the air. From the front of the doomed Ellis structure, the fire jumped 50 feet across Walnut st. to ignite the side walls and roof of the Korn Leather Co. At the same time radiated heat ignited the upper stories of the Salwin Leather Co. plant adjoining the grain warehouse, which collapsed within 15 minutes of the time the fire was discovered, sending up a billowing cloud of smoke and flame.

As power and telephone poles caught fire on both sides of the street, cables and lines snapped, knocking out over 350 Peabody telephones, and disrupting essential fire communications. Because of the resulting lack of communications, off-duty Peabody firemen were called to action by the constant ringing of the fire alarm from 6:00 A.M. until after 7:30 A.M. Out-of-town fire forces were summoned through calls made by police from phones near the Peabody-Salem line, as it was impossible to communicate with them via the normal means at central fire headquarters.

Falling power lines threatened fire fighters but they held their ground and as incoming aid arrived, water curtains were set up to prevent further extension of the blaze, while firemen carried lines up ladders and operated them onto the Korn and Salwin properties. In this operation the Peabody aerial ladder gave a good account of itself.

At the outset, low water supply reportedly handicapped fire fighters, but this defect was remedied when additional pumps were thrown in. The smoke and confusion of alarms and response brought thousands of spectators to the scene and to handle the extra traffic, and guard property, Police Capt. Maurice F. Collins dispatched a police call over the audible system of the fire department shortly before 7:00 A.M. This brought out some C.D. auxiliary police in addition to off-shift police.

Prompt Response from Outside

According to authorities, the prompt response of neighboring fire forces prevented a serious conflagration. Lynn sent Engines 3, 10 and 11, the first two going into action within ten minutes after the sounding of the first alarm. Engine 11 went to headquarters to cover unprotected areas; Engine 10 stretched in from Mill st. in the rear of the A. H. Whidden Co. with two lines across the B & M railroad tracks, and Engine 3 connected at the corner of Railroad ave. and Central st., stretching in three lines.

Salem dispatched Engine 3, which located at the corner of Mill and Willis sts. Danvers sent its new large Engine 1, which worked from a hydrant near the corner of Central and Wallis sts. Beverly sent Engine 1 with Chief Wittenhagen in charge and this big unit operated from a hydrant at the corner of Walnut and Central sts.

Marblehead dispatched a pumper, which covered in with Lynn and West Peabody at central fire headquarters, where fortunately their services were not needed.

Engine 1 of Peabody, first on the scene, laid its line from the hydrant directly in front of the burning Ellis building but was soon forced to vacate this position for another and safer location. Engine 5 pumped from the corner of Lowell and Central sts. in Peabody Square, and Engine 4 operated three lines from the corner of Wallis and Walnut sts.

A factor in holding the fire was a water curtain on the exterior of the Korn Leather Co. building used in conjunction with a ladder stream from the Peabody aerial ladder. This water curtain was also credited with saving the building a few years ago when the A. P. Ames Co. burned on the westerly side.

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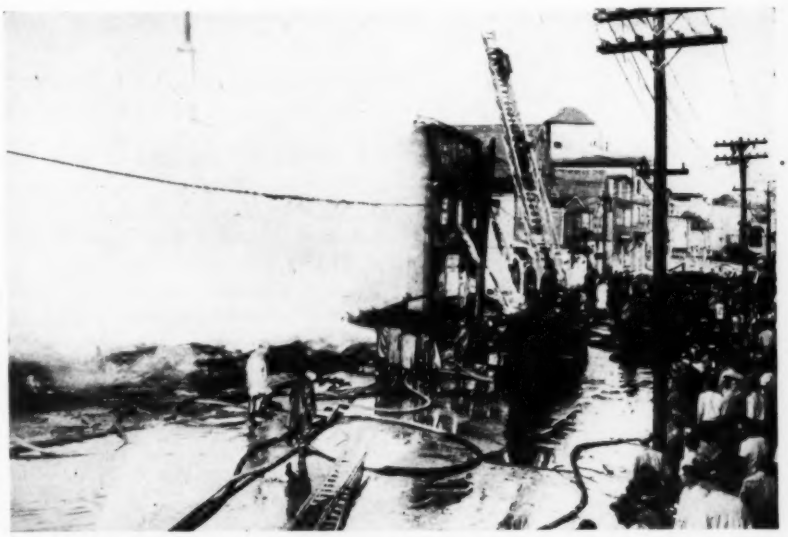


Steam and smoke rise from the burned-out remains of a large granary as firemen wet down ruins. Flames destroyed the granary, burned a leather factory, and partially destroyed a tannery in the heart of the business section of Peabody, Mass.

MARS

RADIAL BEAM

Signal Light

MODEL RB

REVOLVING SIGNAL LIGHT PROVIDING 360° PROTECTION

A dash switch provides two operating positions. In the first operating position the beam is projected only forward of the vehicle, thus eliminating the necessity of installing a shield behind the light to block off the rear beam. If it is desired to have 360° protection the second operating position will project the beam in a complete circular path about the vehicle.

Mechanically and electrically the MARS RADIAL BEAM Signal Light is simple. Sealed beam lamps can be readily replaced without disturbing the waterproof seal between the housing and the vehicle roof. Motor brushes are easily replaced without dismantling the motor.

ALL MARS SIGNAL LIGHTS ARE BUILT OF QUALITY MATERIALS BY SKILLED CRAFTSMEN

It's MARS from Coast to Coast!

MARS

TWIN BEAM
Signal Light

MODEL DX-40

TWO WAY WIDE ANGLE SIGNAL LIGHT PROVIDING 360° PROTECTION

When answering calls the front light sweeps the street and intersections from side to side far ahead of the apparatus, warning all traffic of the direction the apparatus is moving.

This powerful Red beam can be plainly seen by traffic approaching intersection AHEAD of you long before you reach the crossing.

When apparatus is standing, rear light can also be used to provide protection for men and equipment from FRONT, REAR and BOTH SIDES. Front light may be operated separately or both front and rear lights may be operated simultaneously.

ALL LIGHTS are GUARANTEED for 5 YEARS by MARS, Manufacturers of the FINEST in SIGNAL DEVICES

MARS SIGNAL LIGHT CO.

4322 W. CHICAGO AVE., CHICAGO 51, ILL.

Please mention FIRE ENGINEERING *when writing advertisers*

New York Tests Portable Pipe Lines

With patriotic interest in civil defense and to demonstrate the utility of secondary means of water supply if the City's water service should ever be ruptured to the extent that the supply is cut off, a test was made August 12 by Fire Chief Peter Loftus of a portable steel pipe line 1,000 feet in length. The test was held along West Street from a fire boat at the bulkhead between Pier 1 and Pier 2.

The test was announced in Special Order 121 on August 7. The size of the audience, both C.D. and N.Y.F.D. was small. A score of chief and company officers attended and helped supervise a couple of platoons of rookie firemen under the command of Capt. George McGinty. The young men did the heavy work and they did it well with a "do and dare" attitude.

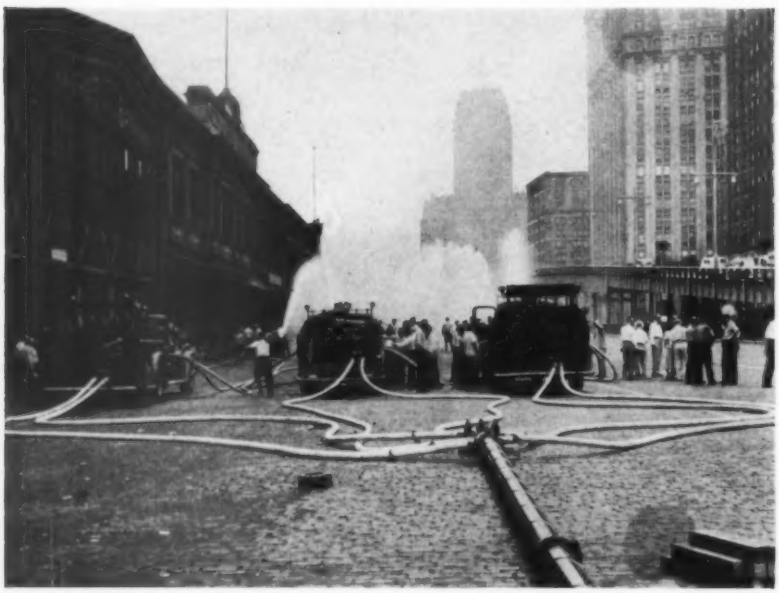
The test was as follows: The fireboat Fire Fighter stretched six 3½" hose lines into a Loftus collector, a manifold device invented by Chief Loftus and which can consolidate six 2½" lines, and supplied 3,015 G.P.M. at 225 pounds. The collector was connected to an 8" steel pipe fitted with Victaulic couplings. Fifty lengths of pipe 20 feet each were "stretched" up West Street. The pipe is the product of the Albert Pipe Supply Company of Greenpoint, Brooklyn. The pipe couplings are not threaded. They have single groove joints with malleable iron housing which gives a positive grip. The collar or housing around the joint is cushioned with a rubber gasket and then bolted in a jiffy with a socket wrench on two sides of the pipe. Probationary Firemen from the school raised each pipe onto a wooden block or cradle to equalize the level of both ends.

At the discharge end of the 1,000 feet of 8" pipe there was a special short length of 8" pipe about two feet long with two outlets on one side and one outlet on the opposite side. To this trio was coupled 3" hose lines. This special link was made in the N.Y.F.D. shops under the personal supervision of Chief Loftus. At the open end of the short length was a three-way discharge gate connected to three 3" lines — making a total of six 3" hose lines of 50' from the 8" steel pipe.

These six lines were connected (two each) into the suction of three 1,000 G.P.M. pumpers, E.6; E.30 and E.202. The suction intake of each pumper was rigged with a Loftus collector and each collector received two lines of hose from the steel pipe. The pumpers were supplied with 1,005 gallons each at 40 pounds, which was built up to 110 pounds pressure. Each pumper discharged the water through three 2½" lines 100 feet long with 1⅛" tips on the nozzles. The nozzle discharge was 335 G.P.M. with 80 P.S.I. on each of the nine lines.

There was a friction loss of about 99 pounds in the 1,000 feet of steel pipe. Fittings were also credited with some of this loss but there wasn't any leak or escape of the water at the joints. The young firemen from the school worked like Trojans and Chief Loftus is giving them a reward of one day off. The signal to start water developed an inconsequential snag when walkie-talkie radio struck a dead spot, but Chief O'Brien corrected this promptly by resorting to the use of Station KEA-292 in the car of Chief Powers. The order to start the water was relayed to Chief Holian on board the fireboat Fire Fighter.

The water barrage lasted 15 minutes. The young rookies held the nine lines without benefit of pipe holders. The technical details of the whole program were planned and worked out by Supervising Engineer Harry Irwin and his staff. Capt. Geo. Kohn of the Marine Div. was an assistant to Chief Holian. Chiefs Conway (H.P.), Burke, Petronelli, Massett, Broderick, McMahon, Muto, the Bennett Brothers, Carlen and ever so many others attended, as did Aux. Capt. Clarence Meek.



New York Fire Department tests new fast-coupling metal pipe. Here rookies use hose coupled to the eight-inch pipe in demonstration at Pier A and the Battery.

Novel ladder demonstration.

At the International Automobile Show, held at Frankfurt on Main, Germany, recently, the new 170-foot Magirus metal aerial ladder took part in a novel demonstration as shown by the illustration herewith. When the ladder was extended to its full height of 170 feet, a helicopter transferred to the man atop the ladder a parcel. The ladder is provided with an elevator, shown at the top of the ladder, which takes a person up at a speed of 1 meter (39.7 inches) per second. For rescue purposes, it can bring persons down to the ground.

Also Col. Robert L. Rummel, Col. Thomas Crystal, Lt. James Costigan and Thomas F. Marrah of Civil Defense. Philadelphia Civil Defense was represented by Henry R. Welsford of the Board of Water Supply. There were numerous representatives of the Victaulic Company, manufacturers of the coupling which they said had been in use 27 years and had been used extensively in World War II.

Chief Loftus was most optimistic and encouraged by the success of the test. He told newspaper reporters that the performance could be repeated in relays to reach into the deepest sections of the City in the event the normal water supply was blitzed.—JERRY DALY.

Better Communications Needed

Fire recently destroyed a house in the Town of Binghamton, N. Y. (not the City of Binghamton), while the owners were away at work. According to reports, the structure might have been saved but for the fact that the town's volunteer fire department has no equipment and the unidentified woman who telephoned the alarm to the Sheriff's department, hung up before the exact location was ascertained.

Deputy Sheriff Harry Thatcher, who received the call, alerted the Conklin, N. Y., Fire Department—believed to be the nearest to the fire from what information the deputy could get. Conklin firemen, checking on the district, learned the fire was in the Town of Binghamton, outside their fire district, and they declined to respond.

At the same time, Chief Ernest S. Youngs of Port Crane, N. Y., the County Fire Coordinator for Broome County, telephoned the Sheriff's department and explained that the Town of Binghamton is without fire protection

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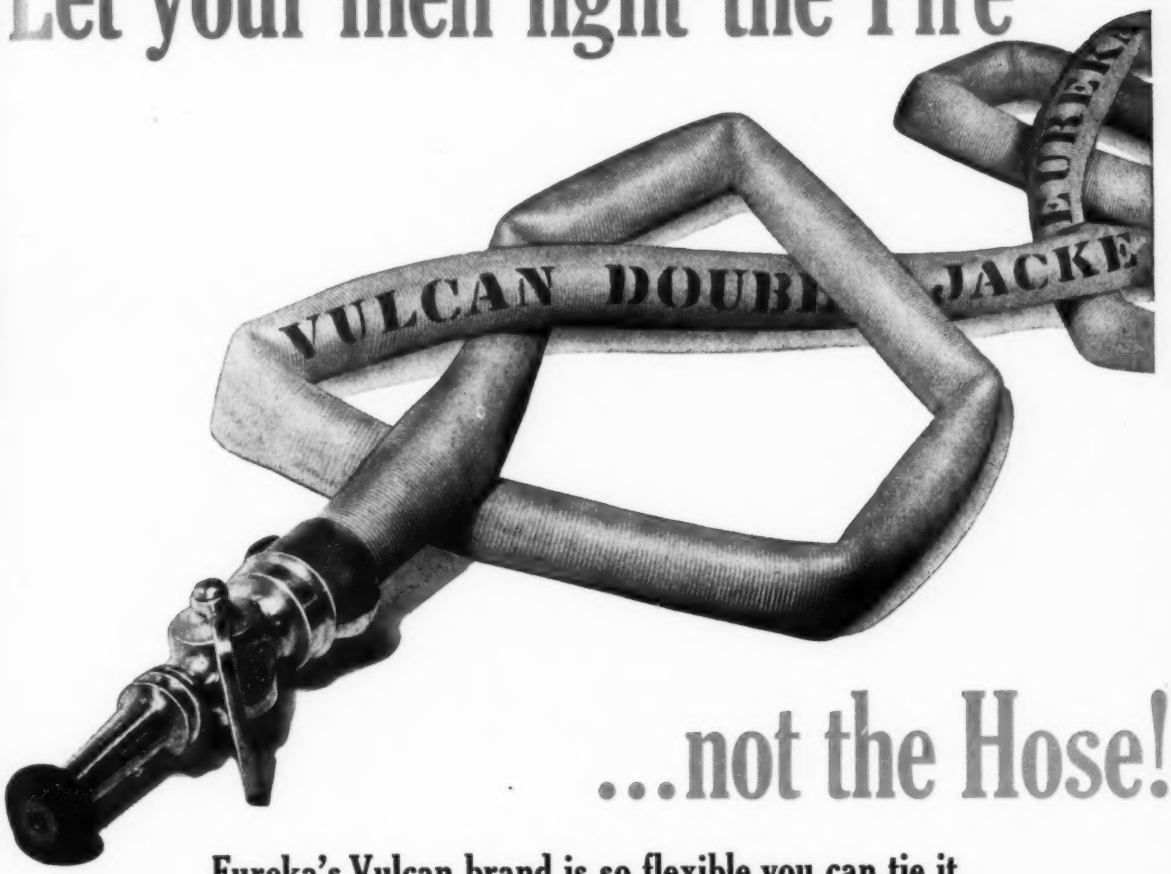
Let your men fight the Fire



...not the Hose!

Eureka's Vulcan brand is so flexible you can tie it in a knot—permits greater flow, easier handling

Here's the lighter, more flexible hose that lets a fireman move *faster* with *less* effort. It's easier to carry or drag, cuts writhing and whipsawing to a minimum ...yet is just as strong and durable as any fire hose on the market!

Eureka's hose experts have built Vulcan with a jacket of cords that are lighter, smaller than those in standard hose, *without* sacrificing resistance to bursting. As in other famous brands of Eureka Fire Hose, Vulcan's Balanced Weave and Controlled Curing eliminate excessive stretch and warp. Exclusive Formula "X" provides mildew-proofing.

★ **Vulcan ... the hose that is both light and exceptionally flexible.**
★ **Balanced Weave and Controlled Curing, which eliminate excessive writhing and warping.**
★ **Formula "X" for positive protection against mildew.**
★ **Bomb-Tested Linings to insure long, dependable life.**

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

195 Hudson Street • New York 13, N. Y.

Division of United States Rubber Company

FALSE ALARMS

Escape by a Whisker

"Daddy," he asked, "is my kitten a man kitten or a lady kitten?"

Everyone on the bus listened.

"A man kitten," said the father.

"How do you know," the child persisted.

You could have heard a pin drop as the father promptly replied, "Well, he has whiskers, hasn't he?"

"This match won't light."

"Wassa matter with it?"

"Damfino. Lit all right a minute ago."

Son: "Dad, what was your great ambition when you were a boy?

Dad: "To wear long pants. And I've had my wish. If there is anybody else in the country that wears his pants longer than I do, I'd like to see him.

A Miss

"Mrs. Jones, I have some good news for you," said the doctor.

"It isn't Mrs. Jones, it's Miss Jones," said the patient.

"Oh," said the doctor. "I have bad news for you, Miss Jones."

A clergyman was being shaved by a barber who had evidently become unnerved by a previous night's dissipation. Finally he cut the clergymen's chin. The latter looked up at the barber reproachfully and said:

"You see, my good man, what comes of hard drinking?"

"Yes, sir," the barber replied consolingly, "it sure makes the skin tender, don't it?"

Wrong Number

Switchboard Operator: "Sorry, Madam, but Mr. Edwards has just gone to lunch with his wife.

Mrs. Edwards: "Oh, well, then tell him his stenographer called."

There's one thing you can say for the men in charge of our government—they're running it like nobody's business.

Motorist: "I'm sorry I ran over your hen. Would two dollars pay for her?"

Farmer: "Better make it four bucks. I got a rooster that was mighty fond of that hen, and the shock might kill him."

"You can't marry her without permission," said the girl's father to the young suitor.

"Why not?" asked the eager swain.

"Because she's a minor."

The young man looked stumped for a moment, then asked: "You mean I've got to ask John L. Lewis?"

"Can't you move further back? You're supposed to be the tillerman!"

Seems like this country has always been seeing red. First it was the redskins, then the redcoats, now the red Russians.

Could Never Find It

Sign posted on bulletin board at Veteran's Airport, Bloomington, Ind.: "Notice! Absolutely no flying over nudist camp located exactly eights miles SSW on a true course of 198°."

Naked Truth

Lady Godiva, we are told, was the greatest gambler in the world—she put her all on a horse. She didn't win, but she showed.

Customer: "I'd like to see some nice nightgowns, please."

Clerk: "For your wife, sir, or do you wish something better?"

Give some weeds an inch and they will take a yard.

Census Taker: "What is your husband's name?"

Mrs. Murphy: "Pat."

Census Taker: "I want his full name."

Mrs. Murphy: "Well, when he's full he thinks he's Gene Tunney."

A psychiatrist was examining a selectee.

Psychiatrist: What's your occupation?

Selectee: I'm a gag writer for radio.

Psychiatrist: Let's see you invent a gag.

Selectee: (rising slowly, goes to the door and looks down at the long line of other selectees): O.K. you guys can go home now, the job's taken.

A man, upon leaving church, greeted the minister thusly—"Parson, that was a damn good sermon."

The preacher replied, "Please sir, your language."

To which the man said, "It was such a damn good sermon that I dropped $100 in the collection."

"The hell you did!" cried the preacher.

Marriage is a mutual partnership—the husband is the mute.

Trying to rest after an exceedingly hard day at the office, poor father was being bedeviled by a stream of unanswerable questions from little Willie.

"What do you do down at the office?" the youngster finally asked.

"Nothing!" shouted the father in exasperation.

After a thoughtful pause, Willie inquired, "Pop, how do you know when you're through?"

"What did Jane do when her husband come home unexpectedly?"

"She let out a terrified shiek."

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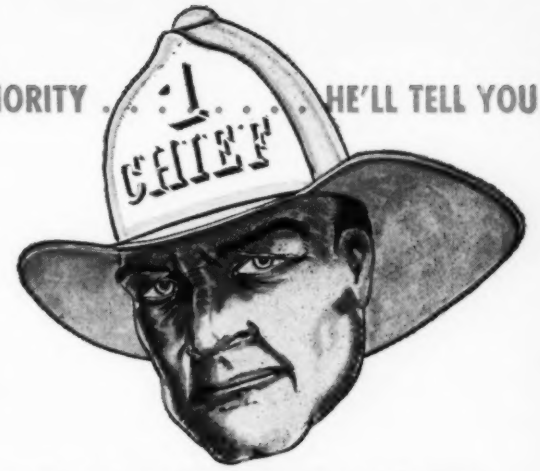

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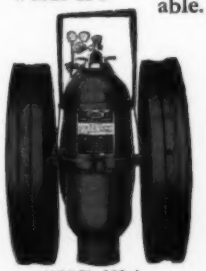
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MODEL J1-340

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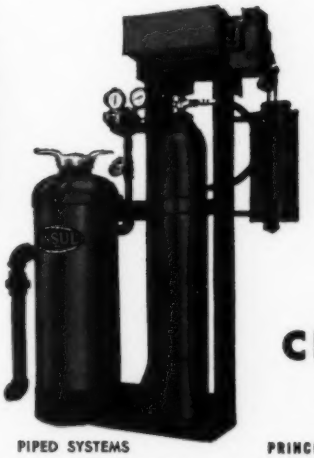

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World Wide Fire News

By Roi B. Woolley

British Express Train Fire Injures 20

Near Huntingdon, Eng., fire on July 14th, last, aboard a speeding express train sent flames roaring over four crowded coaches, injuring 20 of the hundreds of passengers trapped inside.

The passengers not injured by fire smashed windows and poured out of the doors as the train was brought to an emergency stop outside Huntingdon Station about 65 miles north of London.

The train had come from London, bound for Leeds with a heavy Saturday afternoon standing-room-only crowd which packed the aisles of Britain's continental-type compartment cars. What caused the blaze was not determined but the flames quickly fanned through one coach after another as the train sped along the tracks. The blaze was similar to one which killed five persons a year ago aboard a fast Glasgow express at Beattock, Scotland. The fire then was blamed on a cigarette tossed behind an upholstered seat.

Nine of the injured were kept at Huntingdon Hospital, two listed in serious condition.

* * *

West Coast Alert to Guard Forests

All the West Coast states were on the alert the end of July as they faced fire conditions as critical as in 1950. In California, which has suffered several serious forest and brush fires, the fire danger is not considered over until the end of October. With losses for last year in that state alone of $25 million, forestry and conservation forces are bending every effort to safeguard vital defense resources. Human carelessness was blamed for 71 per cent of the 4,766 forest and range fires in California; lightning for the rest. Smokers were held responsible for 972 fires. Statements of a state forester claim that "all these fires damaged resources which are vital to defense production."

"The mountains and foothills in which these fires burned, 'foresters point out' supply most of the water for California's cities, agriculture and industry; most of the wood for its construction jobs and wood-using industries; most of the feed range for its sheep and cattle; the habitat for fish and game; and the enjoyment which millions of people derive from mountain recreation."

* * *

From the Fire News Ticker

In June, the Army used motorcycle and truck sirens in moving a top-secret agency at the nation's capitol. It chose a traffic rush hour for the job. A convoy of trucks were in the procession, carrying equipment and files of the Office of Research to new quarters. The sirens and the 50-mile-an-hour-pace of the convoys startled Washington's homeward bound crowds, arousing rumors that something big was up. Curious persons called Army headquarters. One woman was told by the Army—*It's a secret move!* . . . Fire of undetermined origin razed the U.S. military advisers' hostel in Haipei, Formosa, on July 29th. Damage was estimated at $100,000. The hostel, known as Liberty House, was one of Taipei's most modern buildings. . . . In Syracuse, N. Y., Wesley King, 60, member of the Hancock Field Fire Department, fell dead of a heart attack when he saw an F-48 jet plane of the 138th Fighter Squadron veer off the runway and skid in a cloud of dust across the field. The pilot escaped without injury. . . . From Cedar City, Utah, comes word of a naval reserve pilot who crash-landed his Corsair fighter plane on Highway 56 about 65 miles west of Cedar City. He was only slightly injured. His engine stalled at 29,000 feet and he glided the plane down to the landing on the highway. No news about the motorists! . . . Two persons died and several were severely injured Aug. 5th when a bus carrying 16 vacationers to the Eifel Mountains caught fire near Trier, Germany. . . . In Edinburgh, Scotland four ambulances from Edinburgh, Musselburgh and Haddington rushed to nearby Longniddry on a report of a plane crash. They found no dead or injured—only the wreckage of a three-foot model plane. . . . Fire on July 29 last damaged the thatched roof of one of Scotland's shrines, the cottage where the poet Robert Burns was born 192 years ago. The curator, his son and two visitors fought the fire until the fire brigade arrived and stopped it from spreading. . . . Four men were killed July 12th when a ton of explosives went off at the Du-Pont powder plant at Seneca, Ill. All that remained of the small frame building where they worked was a hole in the ground. One body was recovered. The 20-ft. square building was reported to be a gelatin cartridge plant in which explosives in gelatinous form were placed in paper shells for manufactur-

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ing of small cartridges. . . . The Augusta Victoria Hospital in the part of Jerusalem occupied by Jordan was reported on Aug. 4 to have been almost totally destroyed by fire. The hospital was under U.N. supervision. . . . The Boston Navy Shipyard had the lowest fire loss of 137 naval installations in 1950—with a loss of only $20 out of a total valuation of $712,000,000. . . . When comedian Danny Kaye arrived in London on his last engagement he was greeted at the airport by fire engines. The London Airport staged an emergency stand-by because the Pan American liner on which Danny was a passenger flew from Ireland with one wheel down. . . . A blast in an explosive plant in Bethune, France on July 7 killed 13 men and seriously injured 12. . . . Underground resistance groups in Bulgaria are reportedly burning wheat fields under the slogan *"Not a single seed of grain for the Soviet Union."*

* * *

Guinness Brewery Has "Stout" Fire

According to the British journal "Fire Protection and Accident Prevention Review," Dublin, Ireland's, recently-installed radio system "proved invaluable" in speeding mobilization of three pumping engines, an aerial ladder and tender at a fire on May 26, last, which involved a large two-story paint shop at the world-famous Guinness brewery. Damage estimated at £70,000 was caused. In addition to the paint store, an overhead coal conveyor and the roof of the plant power house also were involved.

The fire originated about 12:20 A.M. in the 100 ft. x 75 ft. paint shop which was stocked with highly flammable material. The cause has not been established. The conveyor, which was enclosed, passed over the paint shop to the power house about 100 yards away. It comprised an endless rubber belt inclined to the roof of the power station. Heat from the burning paint shop ignited this belt, spreading the blaze to the power house roof, over 100 ft. in height.

Part of the conveyor also passed over some large fuel oil tanks and at one time it was feared a collapse of the conveyor might ignite the oil storages. Fire fighters, using lines inside and outside the conveyor, managed to prevent extension of the fire to these exposures.

Reportedly, the power house fire was the most difficult to handle. A stream from the aerial ladder confined the fire at one end of the building until firemen managed to work their way to roof level via an inside staircase. Taking advantage of a fixed hydrant system in the building, they managed to control and extinguish the fire by 1:40 A.M.

Ten streams in all were used in the operations.

* * *

Fire Visits Dublin's Famous Abbey Theatre

Fire that swept Dublin, Ireland's, famous Abbey Theatre early on July 18, last, demolished the stage, dressing rooms, scenery and a valuable collection of props amassed since the theatre was founded in 1904.

The auditorium, vestibule and manager's office suffered no serious structural damage however, and the collection of paintings of early associates of the Theatre were saved.

Firemen prevented total destruction of the theatre, which has a capacity of 520 persons.

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For Practical Discussion of Current Fire Department and Fire Management Problems

CIVIL DEFENSE PROGRAMS OF FIRE DEPARTMENTS

THE discussion in this Round Table is a continuation of that which appeared in the August issue on Civil Defense programs of fire departments.

The generous response from our readers makes it necessary to carry over the discussion to this issue and the October issue as well.

Readers are invited to send in their comments on this subject which is described in the box below, to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

HERE IS THE TOPIC

1. **Has a Civil Defense program been initiated in your city?**
2. **Briefly, of what does it consist?**
3. **Is your fire department a member of a mutual aid group?**
4. **Have you endeavored to enroll, volunteer, or auxiliary members in your fire defense set-up?**
5. **Have your efforts been successful?**
6. **If not, what do believe would be the solution to this part of the program of Civil Defense?**

Discussion of the Question

L. E. Halstead, Chief, Youngstown, Ohio: Civil Defense in this area is a joint city-county organization. This was agreed to by legislation because the population of Youngstown comprises about two-thirds of the Mahoning County population.

A single director on a paid basis has been appointed. The staff is on a volunteer basis. The program has been developed to such a high degree that it was recognized by the Freedom Foundation, along with seven other cities and counties in the nation, and we were presented a gold medal award.

Eighteen auxiliary firemen completed a sixteen-week course on fire fighting and will now be used as instructors to train other men. Graduation exercises were held on June 13. The training course was conducted by Fire Chief Merle Gifford of the Boardman Department.

Charles L. Slade, Chief, Des Moines, Ia.: A Civil Defense program has been initiated in our city on a standby basis.

It consists of all branches that were organized during the last war with stress on the warden service, who are organized down through the sector wardens and in some cases to the block.

Graduation exercises of the first auxiliary firemen training course of Mahoning County, Ohio
Chief Leroy Halstead of Youngstown is shown handing a diploma to auxiliary fireman Cyril Deley while Mahoning County Civil Defense Director Robert S. Hay and Boardman Township Chief Merle Gifford (to his left) and the other seventeen members of the course look on.

We are not a member of any mutual aid group.

We have enrolled the Junior Chamber members to the extent that we have a member assigned to each officer position in the department from the chief on down through the lieutenants. We feel that when and if it is necessary to do training this standby organization will recruit the necessary personnel as they are a dependable group. The thought seems to be here that the complacency shown by the Government, the fact that no literature has been issued and the failure of the recent legislature to appropriate any fund for the purpose all make it difficult to interest people in a training program.

I assume that if a bomb were to hit one of our cities then the Federal and state governments would get busy. Then I don't think it would be too hard to recruit and train personnel for the service. It seems like a hard way to realize a hazard. However, I guess the fire service is accustomed to complacency where hazards exist.

Frank F. Schroeder, Chief, Everett, Wash.: The civil defense program in this city has been functioning for a year and a half. We are organized on a county-wide basis with a single Defense Coordinator in charge of overall planning. Individual Chiefs of Services have been appointed for Medical Aid, Police, Transportation, Fire & Rescue, Communications, etc. Each Chief of Service has a staff of assistants and workers. We have a central communications center and two additional centers are being planned in the event one is knocked out. I should mention that each essential service has a "three deep" organization of key personnel.

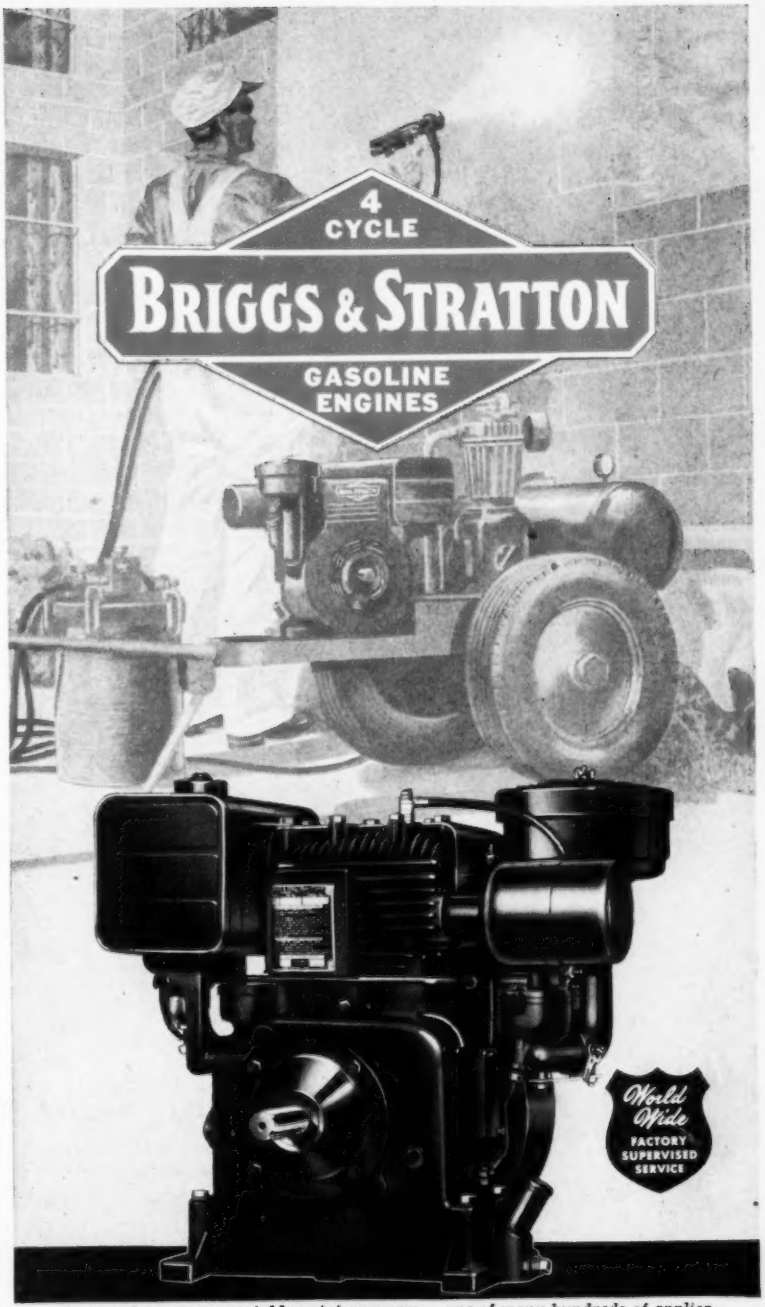
Each fire department within the county is a member of our mutual aid group. We have secured a complete inventory of all fire fighting and rescue equipment and a Control Chief at the center is in charge of dispatching and cover in assignments.

We have not mobilized a reserve group as yet, although we have a large number to call up as needed. Our thought has been to concentrate on the building up of a standard training schedule in the many volunteer departments within our mutual aid group, and in this we have been very successful. It would seem that if the regular fire service maintains a high level of training and efficiency we can readily absorb additional manpower as the need arises and as equipment becomes available.

John R. Butz, Chief, Allentown, Pa.: We have a group of men training once a week with three service trucks. We feel our efforts to enroll auxiliary members has been satisfactory.

Hoyt M. Ayers, Chief, Birmingham, Ala.: Jefferson County, of which Birmingham is a part, has organized and initiated a Civil Defense program. It consists of thirteen divisions covering education, hospitals, public health, welfare, medical supplies, Red Cross, police, demolition, fire, transportation, communications, plant protection and warden service. It is headed by Colonel Louis C. Mallory as Coordinator and Colonel John O. Lawrence as security officer.

The fire department is assigned to handle all fires and help with rescue work. We also train volunteer firemen.



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We have not been too successful in enrolling volunteer firemen. We had hoped for a much larger number; however, we are training the men who have volunteered to help.

It is my belief that we must make the public more conscious of our Civil Defense organization before we will receive the cooperation which is necessary to make this program successful. We have an organized speakers bureau which I believe, is doing a good job along this line.

Thomas J. Maloney, Chief, Jersey City, N. J.: A Civil Defense program has been organized in this city.

We have an average of fifteen civilians training one day a week, afternoon or evening, in each of our twenty-three stations. We use the State Civilian Defense Booklet as a guide for instruction, and have issued helmets and arm bands from World War II to members, pending receipt of new ones.

With the other eleven paid departments in Hudson County we are a member of a mutual aid group.

We have tried several means to increase our membership which has not come up to expectations. The Mayor and Commissioner have issued proclamations; several members of our Fire Prevention Bureau have been speaking to various groups such as civil clubs, industrial meetings, veterans organizations, fraternal and political clubs since November of last year.

We will continue our membership drives, but we do not believe we will be able to broaden our scope of activities unless Federal or State financial help is made available so that enrollees would have proper financial and medical protection in the event of injury.

H. D. Demonbreun, Chief, Nashville, Tenn.: We have initiated a Civil Defense program in our city.

We have a mutual aid agreement with all large cities in the state and cities near the border of adjoining states.

We have trained auxiliary firemen in plants, factories, schools and other places of business where several people are employed with wonderful cooperation.

We have also set up a fire patrol in the county schools.

Some business houses don't want to take time out long enough to give their employees first aid training and training as fire auxiliaries. I think this should be done by all means.

Frank H. Burns, Chief, Grand Rapids, Mich.: We have enlisted and trained auxiliary firemen, policemen, block wardens, control center personnel, etc. The city has appropriated a considerable sum of money to purchase first aid equipment, blood typing kits and other emergency equipment. We have 100 well trained auxiliary firemen and are enlisting and training more.

The spirit of complacency prevails quite to our disadvantage. However, in spite of that we have been progressing with a degree of satisfaction.

We believe the greatest drawback to the program is lack of a concrete program on the Federal level. This missing link retards efforts on state and local levels.

John A. Slattery, Chief, Rochester, N. Y.: The City Manager is director of our Civil Defense program. The operation of it is under a full-time paid deputy director with a paid staff of approximately six persons, one of whom is a deputy fire chief assigned to that office as director of training.

The office has developed all sections of Civil Defense, as recommended by state and national offices. All enrollees are given the prescribed training and several simulated incidents have already been held by the whole system with others being scheduled at regular intervals.

We are members of a mutual aid group.

Herbert F. Travers, Chief, Worcester, Mass.: We do have a Civil Defense program. Briefly it consists of the complete mobilization of our city on an emergency basis to take care of disaster of any type. It includes an auxiliary force covering public works, health, medical, care, hospitalization, fire, police etc.

The fire department has set up a complete auxiliary force (at present 350 men) hoping to have a 1,000 man group. These men have been integrated into a real potential fire department with instructions already started in all the fundamentals of normal fire fighting and prevention and with plans to teach them the rudiments of disaster work.

The Worcester County Mutual Aid Plan, of which we are a member, is already in existence and operable.

In my opinion, it will be necessary to coordinate the efforts of the national, sectional, state, county and municipal groups into one gigantic

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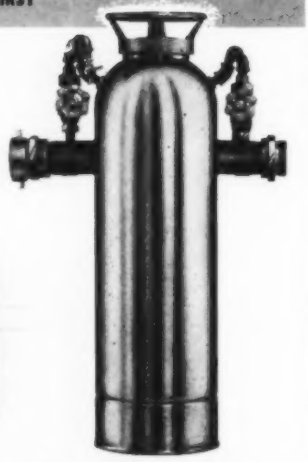

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effort with definite basic tables of organization to work on and a fundamental routine of teaching each group, as well as a standard setup of supplies that might be required.

John C. Klinck, Chief, Memphis, Tenn.: Our Civil Defense program consists of a director, board and several branch units.

We are a member of a mutual aid group.

We have several auxiliary members in our fire section. We have not advanced very far as yet with regard to training, but in the first steps we have been very successful.

Several open meetings have been held and the attendance was very good. It is my opinion that we will receive full cooperation from anyone called on to assist us.

Commissioner C. A. Armour is our director, and he in turn is assisted by all city officials.

Barney J. Houston, Chief, Cincinnati, Ohio: Our Civil Defense program is set up in conjunction with Hamilton County. There are thirty-eight incorporated villages in the county and six cities, of which three of these cities are completely surrounded by the City of Cincinnati.

Colonel Fred T. Bass is the director for the County and W. C. Wichman is director for the City of Cincinnati. I am in charge of the Fire Fighting and Rescue Section of the Training and Operations Division and Superintendent of Fire Prevention Joseph Devine is in charge of plant protection.

We have 256 auxiliary firemen in training, but there is not as much enthusiasm as there was during World War II. Fifty-four fire stations in Cincinnati proper are teaching courses for auxiliary firemen, and forty-five stations in the County have set up training for the County.

We have no equipment to set up auxiliary fire stations as we had during World War II. Men should be equipped with rubber boots, rubber fire coats, fire helmets, etc. I do not think this would solve the problem as no interest is being shown by the civilian, although we have put on many campaigns to increase volunteers but without success.

Pumping units, rescue vehicles and evacation units should be furnished by the Federal Government as this municipality is unable to furnish them.

Paul P. Heinz, Chief, New Haven, Conn.: A full time Civil Defense director has been appointed (a retired Army general) who has already organized the various phases of civil defense. A filter center has been fully organized; an aircraft warning service has been established with observation posts fully manned. Plant protection and security forces are in the making.

We are not part of a mutual aid group.

We have endeavored to enroll auxiliary firemen, but have not been too successful. Only a small number have volunteered.

All substitute firemen (approximately 150) were inducted into the auxiliary units by vote of the Board of Fire Commissioners. This, I believe, is one solution to the problem where fire departments have so-called substitutes or men eligible for a permanent appointment.

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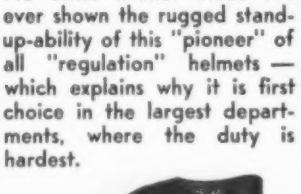
No other helmet made has ever shown the rugged stand-up-ability of this "pioneer" of all "regulation" helmets — which explains why it is first choice in the largest departments, where the duty is hardest.

"SENATOR"

(Aluminum—No. 350)

Where the preference is for aluminum, here is a rugged one-piece "regulation" helmet that is light, durable, safe and comfortable — and largely used by both regulars and volunteers, the country over.



"CLIFTON"

(Plastic—No. 900)

"Regulation" in every line, this latest Cairns Helmet is made of "Flintflex" — a light, tough, flexible material that gives complete protection against impact, heat, electric current and chemicals.

Write for Catalog 331

CAIRNS & BROTHER

(ALLWOOD), CLIFTON, N. J.

Outfitters to Firemen Since 1836

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Lightning Makes "Toaster" of House

The home of Russell Schultz, in Unit, N. H., was turned into a giant toaster not long ago when lightning paid a visit.

The first indication that something was wrong came to Mr. Schultz when he tried to get out of bed. An electric shock threw him back again and again as he placed his feet on the floor.

Finally, he managed to reach the cellar after donning heavy rubber-soled shoes. He was tossed several feet when he threw a master switch. And, switch or no, the light remained on! Next, his wife was knocked across the kitchen when she brushed against an oil stove.

"All the wires in the walls were overheated" Mr. Schultz said. About 2500 volts of juice were coming into the house instead of the usual 110."

All this—and no serious fire developed! Lighting company officials broke the circuit, and blamed lightning for the trouble.

* * *

Vamps Call All Bets Off on Gov. Lodge

Connecticut State volunteer firemen were plenty burned up in July over Gov. Lodge's veto of a bill to relax anti-gambling laws to permit civic and charitable organizations to conduct raffles and lotteries.

The Danbury, Ct., Volunteer Firemen's Assn., representing 350 vamps, asked the Connecticut State Firemen's Assn. to withdraw an invitation to the Governor to speak at the Annual firemen's convention in Stamford, August 17-18 and for similar treatment of State Police Commissioner Edward J. Hickey, who opposed the bill.

Firemen were principal supporters of the bill because most of the state's volunteer companies depend upon raffles and lotteries as a chief source of revenue. Later on, Danbury's Town Firemen's Assn. carried on its annual carnival without games of chance to test whether such events can be financially worthwhile. Attendance was reported about average.

Over in Pequannock, it is reported that despite the ban on wheels of chance, the firemen's bazaar was a financial success. Instead of bingo, etc., the bazaar featured rides for adults and youngsters and games of skill made by the firemen.

* * *

Fireman, Struck by Race Car—Sues State

A voluteer fireman, member of the Mecklenburg, N. Y., Fire Department, in July charged New York State with negligence for allegedly "authorizing" the running of automobile races on a state highway.

The fireman, Ray Saari, is seeking $50,000 damages for injuries he contends he suffered Sept. 23, 1950, during the Grand Prix Automobile Races in Route 329, Schuyler County.

In a suit filed in the Court of Claims, Saari says he was assigned without pay along the highway and armed with a fire extinguisher in case of emergency. He adds he was struck by a race car, driven by Denver B. Cornett, Jr., Louisville, Ky., when the driver lost control in rounding a curve.

Saari seeks damages for a compound fracture of the left leg, concussion of the brain and other injuries. The accident was caused, he charges, because the State Department of Public Works and Division of State Police had authorized the running of the races on a state highway.

* * *

Off the Tape

The city of Ocean City, N. J., was sued last July for $36,000 damages on grounds that a warehouse was destroyed by a fire that city fireman started. The suit said firemen started a grass blaze which swept out of control over half-mile area of swampland and set fire to the warehouse. . . . Two men were killed and 15 injured when a Grayhound bus, en route to California, and gasoline transport smashed together 15 miles east of Big Spring, Tex. Fuel truck was empty. Luckily there was no fire. . . . Yonkers, N. Y., firemen are banned from selling or distributing tickets and advertising without the specific, written approval of the Public Safety Commissioner. . . . Incidentally, Chief William Garvin of the Yonkers Fire Department asks parents to prevent children playing with cigarette lighters. He said in one month he had answered 14 alarms for fires started by kids playing with lighters. . . . Governor Thomas E. Dewey signed a bill that makes it illegal for anyone to "jam" the telephone lines of a business establishment by keeping all its phone lines busy on useless calls. This technique has been used by strikers in attempts to force employers to term and doesn't help the transmision of fire calls! . . . Answering a fire alarm, fireman Ruppel of the Preston, Ont., Fire Department, found his own home ablaze. His daughter, 4, was rescued by his wife and a neighbor. . . . A bolt of lightning exploded among 37 girl picnickers near Idaho Falls, Idaho, killing five and injuring nine others, four seriously. The girls had just decided to get away from the big tree under which they were eating lunch when lightning struck. The party's guide, though burned, reportedly saved four girls by giving artificial respiration. . . . H. O. Rudd, fire department cable splicer of the Kansas City, Mo., Fire Department, doubts that hogs prefer a nice, muddy wallow. He entered his bunk room at Fire Station 7, which had been under water six days (during the flood) and lo!—there on a bed was a full-grown hog that had climbed out of 18 inches of mud and silt from the flood that covered the floor. (Thanks W. A. McDonnell). . . . In Kansas City, bus driver, J. A. Comer, saw a fiery object coming toward him on the night of July 30, last, so he turned his bus with 34 passengers into a ditch. As the vehicle stopped, a flaming motorcycle and its rider, Joel W. Maupin, 17, crashed into the front end of the bus and bounced away. Maupin suffered critical burns. Highway patrolmen said the gas tank had sprung a leak and sprayed both driver and motorcycle with fuel before bursting into flames. . . . Louis (Satchmo) Armstrong, "hot" trumpet player, escaped safely with his trumpet on Aug. 5 from a fire which destroyed the wooden Standish Hall Hotel in Hull, Que., where the maestro was staying with his band. One

person was killed, six injured in the blaze. . . . A false alarm addict in Wheeling, W. Va., has been bragging about his feats to local firemen. When they answered a false call recently, a note on the alarm box said *"This is my 10th false alarm and you haven't caught me yet! Ha! Ha!"* Patience, Nemo, you'll get yours (Thanks Raymond Lee). . . . Speaking of false alarms, in Claremont, N. H., hereafter when Junior, playfully, pulls a box, Dad will foot the bill in court. Fire Chief Esmond Dansereau has ruled fathers will be held responsible for boys who ring in false alarms. . . . In Vincennes, Ind., water started a fire at the home of Clarence Fisher. The water splashed on a fuse box on a porch which was being washed, causing a short circuit!

* * *

Somebody Should "Build a Better Mousetrap"

Firemen at Bridgeport, Conn., answering an alarm of fire on July 11, filled with smoke. The cause: four smouldering mouse traps!

Asst. Fire Chief Albert J. Schmidlin said the mouse traps had been placed in a pail of water for washing, and when the owner, John Lewis, left the store, he forgot to turn off a gas burner, and the water in the pail boiled out, causing the wooden traps to smoulder.

Thanks Tom Magner.

* * *

Red Faced Seattle Firemen "Up in the Air"

The Brothers of Engine Company 9, Seattle Fire Department, Seattle, Wash., with slightly crimson faces, were up in the air literally and figuratively on June 6, 1951, when they had to scoot up ladders to fight a roof fire atop their old frame 2½-story fire house.

A neighbor noticed fire on the roof of the old structure about 11:00 A.M., and shouted to fire fighters standing out front. Whereupon there was action aplenty!

Captain W. E. Davis, nominally in charge of the station, was acting as battallion chief, located at another station on North 45th street and Densmore ave. He headed "home on the double" to take command and directed the blaze beaters in extinguishing the fire, which they did mostly with brooms and axes. At any rate, although charged hose lines were in evidence, Captain Davis termed the fire "darn near normal," and blamed sparks from the building's coal furnace.

The fire, incidentally, threw light on the fire department's replacement and rehabilitation program. Station 9 is one of Seattle's oldest fire houses, having been built in 1897. It is to be replaced in the near future by a modern house. Four new stations have been erected since May, 1948.

Engine 9's pumper is a 1250 G.P.M. unit, delivered in 1946, and one of 16 new 1250/1500 pumpers added since 1946 as part of the fire department's progressive program. Six new city service ladder trucks also have been installed by the department since 1949.

In addition to these improvements, the department has rebuilt two fireboats, the Alki and the Duwamish. The former delivered 18,600 G.P. at 200 P.S.I. after rebuilding, and the Duwamish reached 22,500 G.P.M. in her later tests the same year.

Fire Chief William Fitzgerald, of Seattle, is pretty proud of his fire department—which incidentally is fully radio-equipped.

Fight Forest Fires From Moving Truck

with a HALE Type FZZ Portable Pumping Unit!

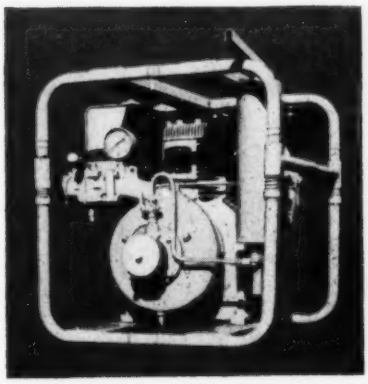
Below are two on-the-spot pictures showing a Hale Type FZZ Portable Pumping Unit fighting a brush fire from a moving truck. The unit can be mounted or carried on virtually any type of equipment, making it extremely valuable for fighting brush, field and forest fires while in motion. Booster tank is used for source of water.

The Hale Type FZZ is a powerful, rugged, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping. The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using hozzle tips up to ⅞".

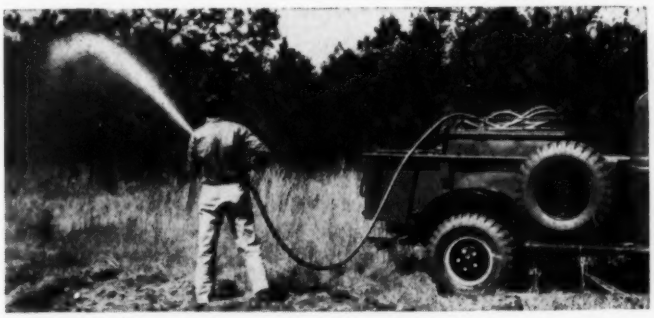
The Hale single stage centrifugal pump is bolted direct to a sturdy four-cycle 8.25 HP, single cylinder, air-cooled engine.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. It can be easily carried to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct.

Also available mounted on two wheels or on rubber-cushioned steel channels.



NOTE: Discharge Adapter can be supplied for use with 2½" fire hose.



● **Write today for new FZZ Folder.**
Let us know if you want a demonstration.

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

Among the Buffs

By Paul C. Ditzel

Private First Class Don Loeffler's copy of the June FIRE ENGINEERING reached him in Korea as he crouched in a foxhole.

Writing under faint glow of a defective light generator, Fire Buff Loeffler wrote from his foxhole that he is homesick for a ripe working fire back in the States. He has been overseas since March, 1949, and hopes to take in a few alarms when he returns to this country sometime before Christmas.

Don writes that he carried Badge No. 10 of the Tokyo Fire Prevention division before he was transferred to Korea. He was an inspector in Japan and later commanded two engine companies on the east side of Tokyo. Don would appreciate hearing from other buffs. His address is Company "B," 62nd Engineer Construction battalion, APO 301, care of the Postmaster, San Francisco, Cal.

Don's fire experiences in Tokyo should make good copy. Perhaps I'll have a report from Don soon.

Correspondent Sapeur Pompier in Buffalo, N. Y., sends word that Ace Fire Buff Carl Hitchcock is really embarrassed. Carl, a 250-pound buff, who is as famous in Western New York as "Moon" Mullins is in Manhattan, stepped outside his house one evening recently to see his truck on fire. The flames caused $500 damage before Battalion Chief John G. Rebhan and company could put out the fire which ignited when fuel from gasoline pumps aboard the truck dripped onto the hot exhaust pipe.

Also from Buffalo way comes word that Hoodoo Fire Alarm Box 29 has done it again. Two firemen were overcome by smoke at a two-bagger in a four-story mercantile building at 110 Seneca street. An occupant of the building was slightly burned. The blaze did $25,000 damage. Hoodoo Box 29 at Seneca and Wells streets got its name from horse-drawn steamer days when Box 29 was pulled frequently for serious fires in which firemen and others were killed or injured. FIRE ENGINEERING carried a story on Box 29 and its fires several years ago.

One of the pluckiest buffs I've come across is John P. Keitz of 8129 Nuernberg avenue, Detroit 34, Mich. Buff Keitz, although deaf since the age of six, says he gets wind of fires through his brother who picks him up in his car and drives Buff Keitz to the fire.

"I do pitch in and help once in awhile," says John, who adds his brother has obtained permission to install a radio in his car for receipt of fire calls.

"Most of the companies in Detroit are equipped with a two-way radio. In 1949 the Chief of Department granted me a fire line pass card and now I don't have trouble getting in the fire lines like I used to have. The cops used to throw me out of the lines many times because I had no proof or any other means of identification."

Buff Keitz says he started chasing fire engines when he was nine years old. During a summer vacation he began visiting Engine 28 and Hook and Ladder 11. He was able to pick up the operation of the fire alarm register and after that was a confirmed buff. John collects rosters of fire departments and fire magazines.

The Kansas City Fire Department and its buffs had their hands full during the recent floods writes Tom S. Jewett, Jr., with the Kansas City *Star* newspaper, one of this country's most reliable and community-serving dailies.

Three fire stations in the flooded area were completely flooded and badly damaged, Tom writes. At one station the water reached to the second floor window. A live pig from the nearby stockyards floated through the window and scrambled to safety in one of the firemen's beds.

"The pig had sense enough to stay there and was alive and kicking when the firemen re-entered their building some few days after the flood," says Tom.

"The flooded-out companies operated from other stations well uptown in the dry area and while two of them are back in their quarters, they are still busily engaged in cleaning up and repairing and the third company, the worst damaged, will probably not be back in their quarters for another couple weeks. Our department estimates damage to the houses, apparatus, and equipment, all traceable to the flood, to nearly $52,000, a claim for which the city has now put in to attempt to secure a refund from the Federal relief money," Tom says.

From California, which also has been known to see rain, has come several notes and a letter from Donald M. Shelburne, editor of "The National FireFan Register."

Don sent along the July issue of the magazine which really rings the alarm

American
FIRE ENGINES

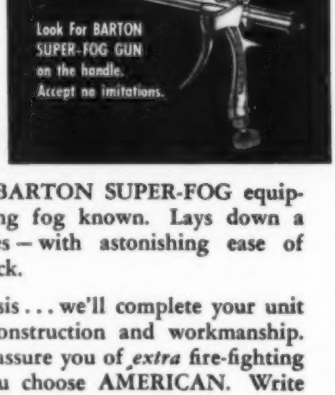
... BARTON SUPER-FOG EQUIPPED

Give you extra fire fighting power—

Choose your favorite make of chassis—

We take responsibility for entire unit—

Choose from a variety of front or mid-ship mounted pumps—



On your AMERICAN engine, you get BARTON SUPER-FOG equipment – for the most effective fire-fighting fog known. Lays down a perfect fog blanket – at various ranges – with astonishing ease of control and freedom from hydraulic shock.

Choose your favorite make of truck chassis ... we'll complete your unit with careful pride in every detail of construction and workmanship. These things, plus many special features, assure you of *extra* fire-fighting power and *extra* dependability when you choose AMERICAN. Write for literature and name of nearest representative.

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bell. The magazine is well edited, and has some of the best fire photography I've seen plus good pictures of old-time equipment. The 8½ by 11-inch magazine comes out monthly and the subscription price is $1.50 a year. Editor Shelburne's address is 7614½ Seville avenue, Huntington Park, Cal. For collectors of various firemania, "The National Firefan Register" is a must. Don, incidentally, is communications engineer (secretary-treasurer) of The Box 15 Club of Los Angeles.

Time to again pick up. I appreciate the many complimentary and flattering letters you buffs have been sending. Although you may not see your names and adventures for a column or two after I get your letters, please do not hesitate to send me any fire buff news or anecdotes you think other buffs would find of interest. And if you're passing through Chicago please telephone me at the Associated Press, State 2-7700 or you can reach me at home: 859 Wellington avenue, Chicago 14, Ill. My telephone number is Eastgate 7-5796.

Water Supplies for Civil Defense

Water, where to get it, how to get it, and how to keep it flowing is the number one problem in wartime fire-fighting, the Federal Civil Defense Administration pointed out recently. The Federal agency tackles this problem in a new manual called "Water Supplies for Wartime Fire Fighting," which has been sent to state and local civil defense officials.

Pre-attack planning is a must, FCDA says, since one of the lessons learned in World War II was that peacetime water supplies are inadequate for fighting wartime fires.

When an attack comes, survival or disaster for millions may rest on two things—keeping in service as much of the public water supply system as possible, and providing auxiliary water supplies, separate from the public water system, for fire fighting.

The manual makes suggestions for maximum operating efficiency of the public water supply system, and outlines what should be done for its protection, improvement and maintenance. It tells of procedures for emergency operations and points to the need for safeguard from sabotage.

The great fires in Germany and Japan during the last war have taught us one thing, FCDA states. Our public water supply could be exhausted or rendered completely ineffective in a short time. In Tokyo, efforts to combat fires were futile thirty minutes after the first bomb dropped. Water mains in Hamburg were broken in 847 places by high-explosive bombs, and its water system completely disrupted, this in spite of good pre-attack planning.

Auxiliary water supply sources, such as oceans, lakes, rivers, ponds, streams and wells, and even private water supply systems in public and private institutions, industrial and commercial plants, must be utilized. Technical means of doing so are outlined in the manual.

In common with all other civil defense operations, there will be need in this field for volunteer help, trained to act in emergency, and equipped with the necessary tools. The manual makes suggestions on this point also.

The National Board of Fire Underwriters furnished much of the material included in this manual. It is for sale

WOULD YOU PAY JUST $60 TO MULTIPLY THE EFFECTIVENESS OF YOUR FIRE-FIGHTING EQUIPMENT?

It wasn't long ago that it was impossible for most fire trucks to handle bad spill fires or fires over any great area.

And there was often real trouble when they had to go beyond the range of regular water supply. They had only as much extinguishing agent as the capacity of the water tank on the truck. They had no way to "stretch" it. Once their 100 to 200 gallons was gone, they were finished.

Is *your* department still struggling against these obsolete limitations?

Well, it needn't. Not any more. You can modernize every truck you have—make it effective for gasoline and oil fires—increase mightily its fire-killing power on ordinary combustibles when water supply is limited.

And you can do it for the staggeringly low price of just $60 per truck!

Air Foam Playpipes—the modern way to step up fire-fighting effectiveness

The secret of increased fire-killing power is *air foam*—that remarkable tried-and-tested invention. With one gallon of Pyrene* Air Foam Compound and 20 gallons of water, you can produce 350 gallons of fast-acting air foam—the *sure* agent for blanketing fire and keeping it from reflashing. And you can do it *instantly*—with no complicated apparatus, no difficult operating tricks. You simply connect a Pyrene Air Foam Playpipe to a hose line. It automatically mixes foam compound and water to produce and discharge huge quantities of air foam. One man can operate the playpipe anywhere your hose lines can go. What's more, it can discharge either foam or plain water.

Think of it! With a 100 gallon water tank, *you can produce 1,750 gallons of air foam*—even though it should be impossible to get more water! And air foam fully equips you to fight flammable liquid fires, as well as those in ordinary combustibles.

Complete outfit—playpipe, pickup tube, adapter, foam compound—only $60

This is no scatterbrained idea dreamed up by some wild-eyed inventor. This equipment was developed by Pyrene—the most honored name in the fire extinguishing field—the acknowledged leader. Right now, this equipment is in use in thousands of fire departments all over the country. Everywhere, they are enthusiastic about the tremendous job this equipment is doing.

It can do the same kind of job for you—and at a phenomenally low price. You can have a Pyrene Air Foam Playpipe, a pickup tube, a hose adapter and four gallons of foam compound for just $60. That's all you need! Nothing to replace except the foam compound. No installation. Your $60 takes care of everything!

*T.M. Reg. U.S. Pat. Off.

Send coupon today—no obligation

Your department owes it to itself to have a good look at this remarkable equipment. All you need do to arrange such a look—with no obligation whatsoever to buy—is to send the coupon. We'll take care of the rest. Send it right now—don't give yourself a chance to forget!

Pyrene FIRE EXTINGUISHERS

PYRENE MANUFACTURING CO.
(Affiliated with C-O-Two Fire Equipment Co.)
594 Belmont Ave., Newark 8, New Jersey

Yes, we'd like to see how the Pyrene Air Foam Playpipe can multiply the effectiveness of our fire-fighting equipment for just $60. I understand we are under no obligation whatsoever to buy. Have someone come around to our firehouse on _____ (date) at _____ (time).

We can't wait! Send us _____ sets of model PP14 Pyrene Playpipes, Foam Compound, etc., @ $60 each. Our hose thread size is _____.

My name _____

Name of our department _____

Department address _____

City or town _____ State _____

My position _____

100 SIMULTANEOUS FIRES

No Water! Streets Blocked! Broken Sewers!

It can happen in your community through enemy bomb attack, sabotage, carelessness or natural disaster.

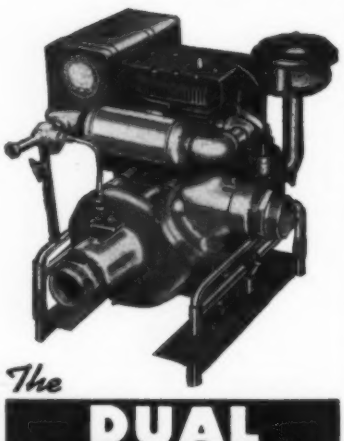
Plans for **Civil Defense** now top the list in most municipal programs.

In such an emergency one of the first needs is for **pumps**. Numerous fires - not enough equipment - truck pumpers can't get through - water pressure low or water mains broken - - - what to do?

Many wise officials are prepared for such an emergency. The **Dual Fire Fighter** is a reliable, light portable pump, weighing only 162 pounds -- easily carried by two men. It fills a vital need as a booster pump, or when the truck pumper is unavailable or when it is impracticable for the pumper to reach the fire, the Dual Fire Fighter will fight fires direct.

Write and find out what others think of these invaluable and economical pumps.

Ask for Bulletin No. 9-FD-11



The **DUAL** *Fire Fighter*

The "Dual Fire Fighter" requires very little space on the pumper. Pump is integral with 4 cycle, single cylinder, air cooled engine of 8¼ H.P. Every pump is factory tested before shipping.

THE GORMAN-RUPP COMPANY
MANSFIELD, OHIO

The Longest ROLLING Siren in Existence
Our 8" Electric Siren

MAKE US PROVE IT

The LOUDEST Siren in Existence
Our Engine Driven Siren

MAKE US PROVE IT

We will ship express prepaid to any fire chief for 15-day try out to conclusively prove our claim. If it don't cut the buck, bounce it back, express collect.

Write for Circular Matter

J. N. HEDBERG 321-49 WEST REED STREET SAN JOSE, CALIFORNIA

to the public at a cost of 10 cents and can be obtained from the U. S. Government Printing Office, Washington 25, D. C.

Persons in the News

Chief James Higgins Retires

Fire Chief James J. Higgins retired on August 15, 1951, as head of the Schenectady N. Y. Fire Department, a post he has held for the past 14 years. His retirement climaxes a career of outstanding service, to state and city, that dates back 38 years.

James J. Higgins entered the Schenectady fire department in 1913 and rose steadily through the ranks until 1937, when he was appointed chief to succeed August G. Derra.

From the start, Chief Higgins has waged a never-ending war on fire, a war not only to control it, but to prevent it. His persistent prevention drives carried the story of the dangers of fire into every dwelling and business—and to every resident of the city. In this connection, Chief Higgins showed a flair for good public relations which brought his city and its fire department wide acclaim. His efforts have been vindicated by the great drop in fire losses in Schenectady since he took over.

Most of the fire equipment now in use in the department, including the radio communications system, were purchased during his tenure as chief. He also was responsible for the erection of the drill tower and the local firemen's training program.

Chief Higgins rendered service on the state level when he was appointed state fire administrator, in 1942. His task was to coordinate the efforts of over 90,000 state fire fighters in setting up the state's wartime fire defense program. He returned to his post as chief a year later.

During his busy career, the retiring chief has found time for active membership and work in several local city organizations as well as in national and state fire service groups, such as the International Association of Fire Chiefs, the New York State Association of Fire Chiefs and others.

Commenting on his retirement, the Schenectady Gazette said editorially: "Jim Higgins has been an outstanding public servant. His successor as chief will find he has a big pair of shoes to fill."

Grumet New York City's New Fire Commissioner

New York City has a new fire commissioner in the person of Jacob Grumet, lawyer, judge and a public prosecutor for sixteen years. He fills the post left vacant by the transfer of former Fire Commissioner George P. Monaghan to head of the City's Police Department. Selection of the new commissioner by Mayor Vincent Impellitteri is acclaimed generally by the fire department and press.

Commissioner Grumet, who was sworn in August 2, is 50 years old and was born in New York. He graduated from the city's public schools and in 1919 from Columbia University. He graduated from Columbia Law School

in 1923. His career as a public prosecutor began in 1931 when he became assistant to United States attorney George Z. Medalie. He served also under United States Attorneys Thomas E. Dewey, Martin Conboy and Francis W. H. Adams. He was also Judge of General Sessions Court.

In 1935 Mr. Grumet became a member of Mr. Dewey's staff and participated in the racket investigation which continued through 1937. In 1942 he became head of the Homicide Bureau in the District Attorney's office, then headed by Frank S. Hogan who conducted the current investigation into irregularities in the fire department. Mr. Grumet resumed his private law practice in 1947.

The new commissioner is a member of the Bar Association of the City of New York and the New York County Lawyers Association and has served on important committees of both organizations. His annual salary as commissioner is $15,000.

Commissioner Grumet, who has already conferred with former Fire Commissioner Monaghan, has announced that he will continue the program laid out by his predecessor, which called for a cleaning up of certain irregularities in the department, replacement of antiquated fire equipment, and general improvement in the department as recommended by the Mayor's Committee on Management Survey. One of these recommendations under consideration is further development of the fire department's training program and facilities.

In taking his new post the commissioner cautioned that it would be unfair to stigmatize the entire 11,000 members of the New York Fire Department for the misdeeds of a handful. Most firemen he said are "honest, decent and hard working."

The Hallett Family of Fire Fighters

Fire chiefs run in the Hallett family of Nevada City, Calif. On July 31, 1951, William Hallett, 25, was appointed Chief of the Fire Department and it is said the new chief is the fourth Hallett to be so named.

It all started in 1878, when William Hallett's great-grandfather was selected to head Nevada City Fire fighters.

V. Bartley

Saskatchewan Chiefs Convene

Although wet weather reportedly held down the attendance, the first annual convention of the Saskatchewan Association of Fire Chiefs, held June 26, 27 and 28 at Prince Albert, Sask; was considered highly successful.

The three day business sessions included lectures by foremost authorities on civil defense, atomic attack, and various fire fighting subjects. The host chief, Alf. Turner, provided accommodations for all, and his fire fighters staged a spirited demonstration.

It was decided to continue the present officers of the Association, formed in January, 1951, for another term. The officers are: President, Chief Thos. Lennon, Saskatoon; Vice-President, Chief Wm. Cook, Moose Jaw, and Secretary, Chief Wm. S. Winton, Estevan. The next convention will be held in the City of Regina, in June, 1952.

"More protection -at lower cost to taxpayers with RCA 2-WAY RADIO"

says **Chief Radio Engineer Marshall L. Dull** City of Wilmington, Del.

Headquarters control—dispatches protection to citizens over more than 100 square miles.

Fire fighters get on the scene sooner.

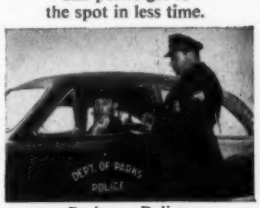
S.P.C.A. gives better service.

"RCA 2-way radio gets men with 'know-how' to trouble spots—FAST. Their skilled direction in those early precious minutes speeds law enforcement, lowers fire losses—definitely saves money for our citizens."

Wilmington's unique 2-way radio system links all law-enforcement and fire-fighting facilities into one protective network. Two headquarters stations . . . one for regular service . . . one for emergency . . . control 51 two-way radio mobile units (and all fire houses).

The police get to the spot in less time.

Just one instance among hundreds where RCA 2-way radio communication is protecting taxpayers and saving them money. Learn about its value in *your* own operations. Write Dept. P-6, RCA Engineering Products, Camden, N. J. (*In Canada, write: RCA Victor Company Limited, Montreal.*)



Parkway Police keep parkways safer.

Just off the press—new brochure giving vital facts about RCA 2-way Radio for safety. Mail coupon below.

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Send me the new brochure on RCA 2-way Radio Systems.

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RADIO CORPORATION of AMERICA

Obituaries

Chief N. B. Remley

N. B. (Nick) Remley, 73, Chief of the Moorhead, Minn., Fire Department since 1903, died at his home in that city on August 8.

He joined the Moorhead fire department as a volunteer in 1897 and in 1903 he became the volunteer fire department chief. On April 15, 1923, he was appointed as Moorhead's first paid chief.

Prior to becoming the full-time fire chief, Mr. Remley worked for the Parke, Grant and Morris wholesale grocers of Fargo from 1898 to 1923.

Chief Remley was born at St. Cloud Feb. 28, 1878, the son of Mr. and Mrs. Frank X. Remley, and came to Moorhead when he was two weeks old. He was educated in the Moorhead public schools and graduated from Moorhead high school.

He was a member of the Minnesota State Fire Department association, the International Association of Fire Chiefs, The Great Lakes Association of Fire Chiefs, the Northwest Regional Fire School, and the Moorhead Chamber of Commerce.

His hobbies included fishing and collecting old newspapers, fire pictures and scrapbooks.

Chief Remley almost lost his life while fighting a fire in 1898 when Sandy McLean, a policeman aiding in battling a blaze which destroyed a home on Elm street north, was killed. The brick chimney collapsed and falling bricks killed Mr. McLean and seriously injured Mr. Remley.

Carrol (Shorty) Malvey, assistant fire chief, will assume the direction of the fire department until a new fire chief is appointed by the mayor.

Bozeman Pepperman

Bozeman Pepperman, New York representative of the Seagrave Corporation of Columbus, Ohio, manufacturers of fire engines, died August 6 in his home at the Hudson View Gardens. His age was 68.

Born in Montgomery, Ala., Mr. Pepperman began his career in Birmingham, Ala., as secretary to the Mayor of that city. He came here as the Seagrave representative in 1920. He was a director of the Hudson View Gardens

Mr. Pepperman leaves his wife, the former Louise Merwin; two brothers, W. L. Pepperman of Washington and B. J. Pepperman of Los Angeles, and a sister, Mrs. Maude T. Moore of Minneapolis.

The Cover Picture

The explosion of a 2,500,000-gallon alcohol storage tank by a bolt of lightning on the night of July 28th, last, at the Institute plant of Carbide and Carbon Chemical Corporation, Charleston, W. Va., brought into play an array of the most modern fire control techniques and facilities.

The huge tank, located in the extreme western end of the plant grounds, let go about 8:15 P.M., ripping off the big metal top of the tank, sending it flying a distance and immediately igniting the highly flammable contents.

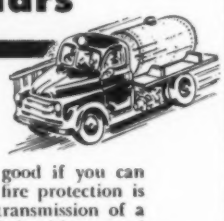
Firemen credited an automatic foam injector inside the burning tank with lessening the danger of the fire spreading. At the same time, the fire protection system of the plant, installed to meet the fire hazards peculiar to the company's operation, was put to work. An outstanding feature of this system is the battery of monitor nozzles and protection shields, with the heavy fire streams, shown on the cover illustration, which were used to surround the burning tank and, operated with or without manual direction, to cool down the shell and contents as the latter virtually burned themselves out during the more than 20-hour fight to prevent extension of the hot fire to a similar nearby tank reported filled with 2,500,000 gallons of benzene.

The monitors were connected to large hose lines, in turn supplied by the plant water and foam extinguishing system, and by fire fighting equipment brought in by the aiding fire forces.

Plant officials highly praised the work of the fire fighters who, for hours, worked close to the blazing tank the heat of which could be felt two and three hundred yards away.

In addition to plant fire fighting force, under fire chief George Ratliff, outside aid was sent from Charleston, Dunbar, Nitro, St. Albans and Institute. Although no one was injured, no workmen being near the tank at the time of the blast, over a dozen ambulances stood by at the plant gate. Extra police were required to handle the crowds of curious and control traffic on State Highway 35, which runs close to the scene. Spectators were continually warned to stay away from the area by means of loudspeakers set up in the plant grounds.

Build your own fire truck for a few hundred dollars



The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse, N.Y.

It will help if you mention FIRE ENGINEERING *when writing advertisers*

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of August, 1951.

Month Ending August 31, 1951

Huntsville, Ala.—Three two-story bldgs. in downtown section housing a paint store, a finance company and a furniture store, destroyed.
Montgomery, Ala.—Liggett's Drug Store and nearby shoe store, damaged.
Tucson, Ariz.—Safeway store destroyed.
Auburn, Cal.—Business block occupied by Gold Nugget Liquor Store, two cafes, refrigeration appliance store, barber shop and piano store, damaged.
Bradley, Cal.—Bradley Grain Whse. and six dwellings on Highway 101 destroyed. Spontaneous ignition.
Imperial, Cal.—Holly Sugar Co. feed mill damaged.
Los Angeles, Cal.—Plastic Processing Co. plt., E. V. Irving Co. drug whse., Veterans Salvage Dept., Will Wright Ice Cream factory and bldg., destroyed.
Marysville, Cal.—Becker Garage destroyed.
Quincy, Cal.—Genessee Lumber Mill destroyed.
San Diego, Cal.—Six dwellings in Collwood Village section destroyed. Brush fire.
San Rafael, Cal.—San Rafael auto whse., including 13 new cars and three trucks owned by Jack Rhodes Agency, destroyed.
Tahoe Valley, Cal.—Lake Mill Lumber Co. destroyed.
Georgetown, Dela.—Bldg. of Georgetown Lumber Co. destroyed.
Georgetown, Dela.—Henry G. Graves & Son factory damaged.
Washington, D. C.—United Food Stores Corp. storage structure damaged.
Jacksonville, Fla.—Sawmill of H. J. Granger & Son, Inc., destroyed.
Columbus, Ga.—Hangar of King School of Aviation at Columbus Municipal Airport and 20 light airplanes, some privately owned, heavily damaged.
Dalton, Ga.—Dalton Mercantile Co. destroyed and Dalton Trading Post heavily damaged.
Hawkinsville, Ga.—Thompson Theatre, damaged. Faulty neon lighting.
Statesboro, Ga.—F. W. Darby Lumber Co. plt. damaged. Diesel engine.
Valdosta, Ga.—Synthetic Resins, Inc., plant destroyed. Lightning.
Gennessee, Ida.—Prairie Flour Mill elevator and whse. destroyed.
Nampa, Ida.—Lutz Produce Company's sheds and whse destroyed.
Alton, Ill.—Retail electrical appliance store of Alton Refrigeration Co. damaged.
Chicago, Ill.—Bldg. occupied by Ritz Bowling Alley and J. Hayes barber shop, and bldg. occupied by C. Leaife beauty shop and dwellings of L. Gee, L. Davis and K. House, damaged.
Danville, Ill.—Moose clubrooms and stores in half-block-long bldg., damaged.
Hillsboro, Ill.—Montgomery County Farm Bureau bldg. destroyed.
Monsanto, Ill.—Darling & Co. fertilizer plt. destroyed. Spark from acetylene torch.
Wood River, Ill.—55,000 gallon tank of motor gasoline at Shell Oil's refinery, destroyed. Lightning.
Anderson, Ind.—Whse. of Glazer Realty Co. destroyed.
Bloomington, Ind.—Sausage and cooking rooms of Bloomington Packing Co. damaged. Grease in smoke house ignited.
Fort Wayne, Ind.—Sigrist Furniture bldg. destroyed and adj. two wallpaper stores, furniture store, drug store, damaged.
Geneva, Ind.—Grain elevator of Geneva Equity Co. destroyed.
Indianapolis, Ind.—Bldgs. of Max Selig Junk Yard, Midland Engineering Co., Inc. and Inland Distributing Corp. damaged.
Martinsville, Ind.—Martinsville Brick Co. plt. destroyed.
Boone, Ia.—Lodge at Boy Scout Camp, Mitigwa, destroyed. Lightning.
Clarinda, Ia.—Bldg. housing Walker Funeral Home destroyed.
Madrid, Ia.—Bldg. housing Western Printing Co. damaged.
East Jenkins, Ky.—Dwelling of Bill Bladridge destroyed. Defective wiring.
Baton Rouge, La.—Three 37,000-gallon tanks and two distillate treat. units at Standard Oil Co. of N. J. refinery destroyed. Gasoline explosion.
New Orleans, La.—Foray's Restaurant badly damaged.
Peabody, Mass.—Flames flashed back and forth across Walnut St., a four-lane wide factory

ANSWER: Veteran fire fighters agree that these highly trained horses charged from their stalls, were in harness and off to the fire in *LESS THEN HALF A MINUTE* after an alarm was received.

You Can Also Go Into Action FAST With

INDIAN FIRE PUMPS

Modern, up-to-date fire truck with **INDIAN FIRE PUMPS** mounted in place.

Photo courtesy H & H Truck Tank Co., Jersey City, New Jersey

Today's fire departments, foresters, lumbermen, campers and private citizens find **INDIAN FIRE PUMPS** the answer to their need for speedy fire fighting.

A man with one of these famous backpack extinguishers won't lose a minute attacking fires on roofs, in fields, brush, in buildings, rooms or rubbish. When seconds count—use **INDIANS.**

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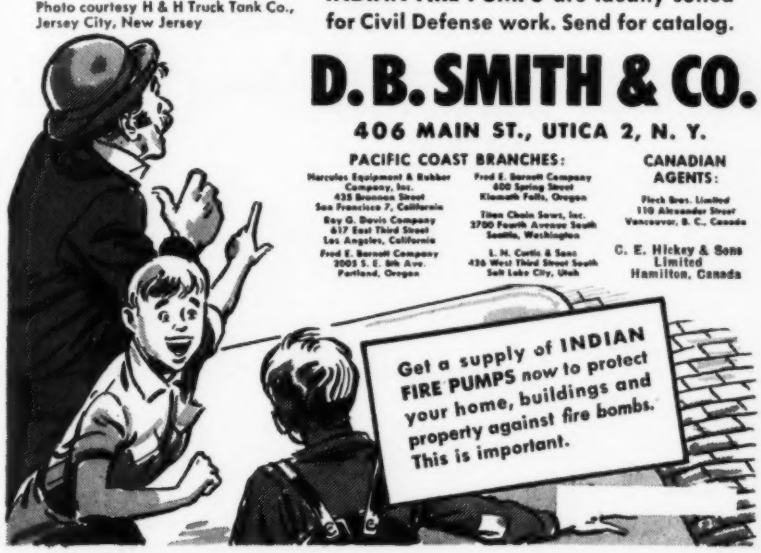

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"Equal to any—Better than Most!"

DON'T COMPROMISE ON QUALITY – DEPENDABILITY

A snagged hose line can cause serious accidents and can ruin your hose. Experienced fire-fighters appreciate the curved surfaces of the "Sensible-Lug" which enable hose to glide over all obstructions thus protecting life, limb and equipment.

Specify Powhatan Sensible-Lug on your next Hose order.

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HOWE Fire Truck Equipment Meeting Every Service Since 1872

Centrifugal, Rotary and Piston Pumps Supplied

HOWE FIRE APPARATUS CO., 1402 W. 22nd St., Anderson, Indiana

street, only one block from the city center at Peabody Square, sweeping seven bldgs. Five companies from seven communities aided in battling the blaze in this leather tanning city of 22,000. One thousand persons were left jobless.

Camden, Me.—Landhaven Preparatory School for Boys destroyed.

Bad Axe, Mich.—Arcadia ballroom and tavern destroyed.

Three Rivers, Mich.—Eddy Paper Corp. plt. destroyed. Spontaneous ignition.

Traverse City, Mich.—Grand Traverse Auto Co. damaged. Leaking gas.

Brushvale, Minn.—Kent Doran grain elevator destroyed. Gasoline engine exploded.

New Brighton, Minn.—Six storage tanks and pumphouse of Kunz Oil Co., south of here, destroyed.

Rochester, Minn.—Co-op Oil Co. damaged. Fourteen storage tanks burned. Explosion.

Royalton, Minn.—Royalty Elevator & Farm Supply Co. elevator destroyed.

Cape Girardeau, Mo.—Twenty-seven freight cars on St. Louis-San Francisco Railway damaged.

Chaffee, Mo.—Harmon furniture store in business district destroyed.

Kansas City, Mo.—Robert Blond Meat Co. bldg. destroyed.

Hamilton, Mont.—Rugaber planing mill machinery, stock, destroyed.

Smithfield, Neb.—Elevator owned by R. C. Christopher Containing 25,000 bushels of $2.00 wheat, destroyed.

Englewood, N. J.—Englewood Sunshine Laundry destroyed.

Fanwood, N. J.—Marlou Lights, Inc., plt. damaged. Chemical washing fluid explosion.

Lakewood, N. J.—Fiedstein's restaurant and liquor store destroyed.

Buffalo, N. Y.—New York Central Railroad bridge spanning Scajaquada Creek, near foot of Dart Street, destroyed. Children playing with matches.

Horseheads, N. Y.—Whse. at former U. S. Govt. storage grounds, leased by Washburn-Wilson Seed Co. and Corning Glass Works, destroyed. Spontaneous ignition in pile of beans.

New York, N. Y.—Three story bldg. occupied by Grease Solvent Co. and Mariners Supply Co., destroyed.

Northville, N. Y.—Lodge overlooking Sacandaga Park destroyed.

Tonawanda, N. Y.—Four storage tanks of Tonawanda Terminal of Richfield Oil Corp., River Road near South Grand Island Bridge, destroyed.

Troy, N. Y.—Three apt. houses on 115th Street, destroyed.

Siler City, N. C.—Bldg. and stock of Darden & Son, local furniture establishment, destroyed.

Spruce Pine, N. C.—Plt. of Feldspar Flotation Co. damaged.

Wilson, N. C.—Tobacco Whse. No. 1 destroyed.

Monhall, N. D.—Elevator owned by Mohall Grain Co. destroyed.

Camden, Ohio—The Wood Oil Co. damaged. Explosion.

Chagrin Falls, Ohio—Brewster & Stroud Co. whse. destroyed.

Cincinnati, Ohio.—Several hundred guests were routed from their rooms as fire swept up six floors through a ventilating chute at downtown Netherland Plaza Hotel, while smoke penetrated through the 29-story hotel. Fire started in the basement coffee shop and swept up the ventilating chute. Guests in the hotel included members of the Brooklyn Dodgers baseball team here for a series with the Cincinnati Reds.

Columbus, Ohio—The plt. of the Larsen Mfg. Co. damaged.

Columbus, Ohio—Storage bldg. and field office of Larcomb Builders, destroyed.

Cuyahoga Falls, Ohio—Falls Stamping & Welding Co. whse. damaged. Sparks from an unknown source falling on roof.

Dayton, Ohio—Two-story bldg. occupied by Crystal Rug Cleaning Co. and Carpet House, Inc., damaged.

Grand River, Ohio—A. E. Staley Mfg. Co. grain elevator, destroyed.

Cottage Grove, Ore.—Ivan Harris Lumber Co. damaged. Torch spark.

Jefferson, Ore.—Santiam Flax Corp. whse. destroyed.

McMinnville, Ore.—Fenton apts. destroyed. Cigarette.

North End, Ore.—Willanch Lumber Co. destroyed.

Troutdale, Ore.—Reynolds Aluminum Co. damaged.

Camp Hill, Pa.—Roller Skating Rink bldg. several miles west, destroyed.

Philadelphia, Pa.—Yard and office bldg. of Lumber & Millwork Co. damaged.

Philadelphia, Pa.—Brody Furniture Store damaged.

Scranton, Pa.—Cooper Rug Co. plt. damaged.

Pickens, S. C.—Whse. and main plt. of Pickens Hardwood Flooring Co. destroyed.

Gallatin, Tenn.—Main bldg. of Gallatin High School destroyed.

Ghent, Tenn.—Cotton waste whse. of Royal Mfg. Co. destroyed.

Memphis, Tenn.—Walker Bros. toy factory damaged.

Oak Ridge, Tenn.—Gamble Valley Shopping Center composed of M & M Supermarket, Bob's Tavern and Gamble Valley Barber Shop and Pool Hall destroyed. Defective wiring.
Houston, Tex.—Southern Display Sign Service destroyed.
Houston, Tex.—First Price, Inc., food plt., destroyed.
Itasca, Tex.—Brick Gin Co. plt. destroyed.
Alexandria, Va.—Two whses. stocked with newsprint at Robinson Terminal Whse. Corp. destroyed. Spontaneous ignition.
Luray, Va.—Bldg. housing Page Grocery Co. and Blue Bell Textile Co. damaged.
Amboy, Wash.—Amboy Theatre, Amboy Tavern, Amboy Grocery and Galloway Restaurant damaged. Defective wiring.
Auburn, Wash.—Auburn Academy Furniture sawmill destroyed.
Bremerton, Wash.—Luxury cruiser Miz-One destroyed. Explosion.
Chehalis, Wash.—Huff Bros. lumber mill destroyed.
Gig Harbor, Wash.—Potlatch Lumber Co. destroyed.
Marysville, Wash.—Seven business establishments including Marysville Appliance Center, tavern, destroyed.
Seattle, Wash.—Lester Apts. damaged. Explosion.
Shelton, Wash.—Shelton blacksmith, barber shop, appliance store and apts. destroyed.
Tacoma, Wash.—Tacoma Boat Bldg. Co. destroyed. Explosion.
Yakima, Wash.—Roche Fruit Co. damaged.
Fairmont, W. Va.—Muntzing Motors bldg. and repair shop destroyed.
Fond Du Lac, Wis.—Grain elevator and four silos owned by Boulay Brothers, destroyed. Spontaneous ignition.
Jackson, Wis.—Rockfield canning plt. destroyed.
Janesville, Wis.—Three-story whse. of Ward Bros. Transfer & Storage Co. damaged. Lightning.
Lake Geneva, Wis.—Three bldgs. on George Brennen farm destroyed.
Cloverdale, B. C.—Cloverdale Real Estate and adj. shops damaged.
Belleville, Ont.—Bldg. housing Everett H. Black's Transport Co., Lecithian Products of Canada, soybean oil producers and Welding Gases and Supply of Canada, destroyed. Explosion.
Odessa, Ont.—Grist mill and genl. store owned by Ben Savage, and service station operated by George Burnett destroyed.
Charlottestown, P. E. I.—Business block facing Queen Mary Square and Prince Edward Island Legislative Bldgs., bounded by Grafton, Great George Kent and Prince Streets, destroyed. Exploding bulb ignited waste in grease pit at rear of garage owned by F. R. McLane, Ltd.
Hull, Que.—Standish Hall Hotel damaged.
Mont Jolie, Que.—Voyer Hotel destroyed.
St. Antoine des Lauren Tides, Que.—Door and window sash plt., owned by Willie LaBelle, and whse of Alexander Brenner, Ltd., destroyed.

Manufacturers' Announcements

Care of Adhesive Tape

Most maintenance men are familiar with the use of paper masking tape in paint spraying operations, but others are using tape for sealing containers of chemicals after they have been opened; for application on axe handles or tools to obtain a better grip, for bundling pieces of equipment together, and for many other purposes.

Industrial Tape Corp., New Brunswick, N. J., offers these hints on how to care for tape.

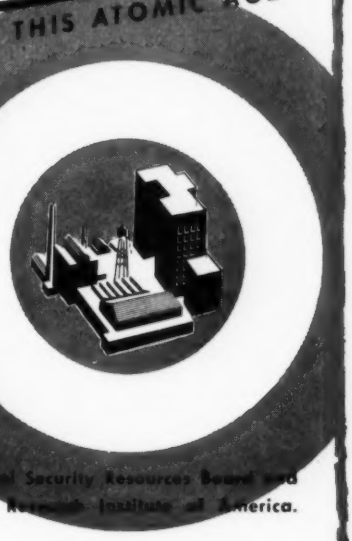
Do not dump tape into a corner or onto a table so that rolls pile one upon the other haphazardly. This will deform the roll and possibly render it useless. Wherever possible, tape should be dispensed through a dispenser designed for pressure sensitive tapes. If this is not feasible, a small wooden rack should be used on which tape can be stored when not being used.

Tape should be at room temperature when it is used. If it has been stored in a cold room, it will be difficult to unwind, with the result that it may tear or break in use. Cold tape should be brought to room temperature or even warmed to about 100° F. before the

Just Released!

TARGET: U.S.A.

A GUIDE TO SAFETY IN THIS ATOMIC AGE



featuring

HANSON W. BALDWIN,

military affairs expert for The New York Times, Pulitzer Prize winner for his reporting in World War II.

Based on studies made by the National Security Resources Board and filmed with the cooperation of The Research Institute of America.

SHOWS PRACTICAL ATOMIC BOMB DEFENSE FOR PLANTS AND PERSONNEL

- How to protect your people and your property
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- How and where to make shelters
- How to select your Chief Warden
- How to recruit a Defense Corps
- How to set up a central control room
- How to set up a first aid room
- How to safeguard your important records
- What to do RIGHT NOW against the possibility of atomic attack

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FOR BOOSTER and HIGH PRESSURE FOG LINES

REMOUNTABLE — without the purchase of additional parts; use over and over again

FULL FLOW — no suppression of flow in coupling

HIGH PRESSURE — tested to 3000 lb., 500 lb. pull

INTERNAL EXPANSION — no shrinkage of hose at coupling

STREAMLINED — free from objectionable projections

ACCURATELY MACHINED — always the same . . . interchangeable

For maximum efficiency, economy and protection in ¾" and 1" sizes, specify Bar-Way couplings attached to hose of proper size.

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operator attempts to use it. This is especially true of vinyl film tapes which lose some of their flexibility at low temperatures.

Hot and damp storage places should be avoided.

Every precaution should be taken to avoid contamination either from dirt or chemicals. Men should be instructed not to leave tape around on dirty tables, shelves or floors.

New Civil Defense Film

"Target, U.S.A.", a dramatic guide for industry planning and preparation in the event of an atomic attack, has been completed and will begin immediate release by Cornell Films, the organization which sponsored the prize winning documentary on the same subject, "Pattern For Survival," which was projected on a home and personal level.

The film runs 20 minutes and was written and directed by Herman Boxer, formerly of the M.G.M. It is in full color and was filmed on location with a cast of professional actors.

Hanson W. Baldwin, military analyst and editor of the New York Times, is featured as special writer and commentator. "Let me put it simply and plainly," Mr. Baldwin warns the audience, "we can be attacked on our own home grounds. Modern air power makes us as vulnerable today as London was in World War II. We must be prepared for the same kind of fire bombs, block busters and buzz bombs that those cities got, plus what Hiroshima and Nagasaki got, the atomic bomb.

Based on studies make by the National Security Resources Board, with the assistance of the Department of Defense and the Research Institute of America, "Target, U.S.A." is a graphic demonstration of industry and personnel in action prior to and under an atom bomb attack. The film utilizes live action, animation, charts, graphs and other Hollywood techniques to illustrate practical defense in terms of plants and personnel. With running commentary by Harry Marble, "Target, U.S.A." answers such basic problems as how to protect people and property, how to build up effective plant-wide defense, how and where to build and allocate shelters, how to recruit a Defense Corps, how to set up first aid stations, how to safeguard important records, and what management and labor can do right now to set up protective measures against the possibility of an atomic attack.

Cornell Films will distribute "Target, U.S.A." in both full color and black and white to industry, national, state and local Defense Corps units, schools, unions, business groups and associations, fraternal and patriotic associaitons.

Hospital Safety

A comprehensive discussion of safe practices in hospitals is featured in the special 44-page issue of the July "Surgical Equipment" (Form No. 2090). Copies are obtainable from the Ohio Chemical & Surgical Equipment Co., 1400 East Washington Avenue, Madison, Wisconsin.

Well illustrated, the publication includes details of safety in handling compressed medical gases; safety in the operating room; and safety in resuscitation, oxygen therapy, and sterilization.

The major items discussed include:

"Compressed Medical Gases"—Classification of gases; properties of gases; rules pertaining to medical gases; recommended safe practices for handling medical gases; medical gases equipment.

"Safety in the Operating Room"—Hazards present; elimination of static-producing materials; humidity control; conductive rubber parts.

"Safety in Oxygen Therapy"—Cylinder storage and handling; equipment storage and maintenance; oxygen tents; oxygen therapy by catheter; mask oxygen therapy; medical gas systems and their installation.

"Safety in Sterilization"—Installation of sterilizers; vent lines; waste lines; various types of sterilizers; construction details; factors in sterilization.

New "Handie-Talkie" Set Introduced by Motorola

A new version of the Motorola "HANDIE-TALKIE" portable F.M. radiophone that incorporates an adjustable squelch is being introduced by Motorola.

The squelch reduces the annoyance of tube and circuit noises normally encountered in an F.M. receiver in the absence of a signal.

The squelch control, mounted on the power supply chassis, provides a normal operating range of no-squelch up to 25 to 50 db noise reduction.

Any possible audio distortion resulting from the portables being used in fringe areas is eliminated as a result of the addition of the adjustable squelch.

The "HANDIE-TALKIE" portables are available with either wet or dry cell power supplies for operation in either the 25-50 megacycle or the 152-174 megacycle bands.

New Brochure on Leece-Neville

A new, 24-page, well illustrated brochure on the company and its products has just been published by The Leece-Neville Co., Cleveland, Ohio, manufacturers of electrical equipment for diesel, gas and gasoline engines, including fire apparatus engines. The brochure outlines the part played by Leece-Neville as a pioneer in this field for over forty years. This is followed by pictorial sections on the company's production, assembly, testing and engineering facilities.

The balance of the booklet shows typical equipment made by Leece-Neville for trucks, industrial engines, off-highway equipment, etc. Included are AC-DC Alternator Systems, generators, starting motors, hand and magnetic switches, and voltage regulators.

New Darley Catalog

W. S. Darley & Co., of 2810 Washington Boulevard, Chicago 12, Ill., has just announced publication of a new, complete catalog covering their entire line. This new catalog of fire equipment is the Company's No. 146. It contains 108 pages, and lists 1,100 items; 750 illustrations are included in its pages. Copies are available to fire department officials, fire chiefs and firemen upon request.

The Marrero-Regusa Fire Company has recently been organized in Louisiana and is planning the purchase of a fire station and fire fighting equipment. Huey Este is Fire Chief and Anthony Ragusais President.

Can your municipality afford to accept a lesser quality?

Specify Blackinton

finest in badges

Few municipalities, today, can afford to purchase unwisely with budgets being squeezed tighter and tighter by increased costs. Therefore, it will pay you to think carefully before placing your next badge order. Ask your supplier for BLACKINTON BADGES and be sure of the finest in badge quality. Check these five points and convince yourself that Blackinton is the best badge buy.

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(2) Precise Lettering
(3) Long Lasting Mirror Finish
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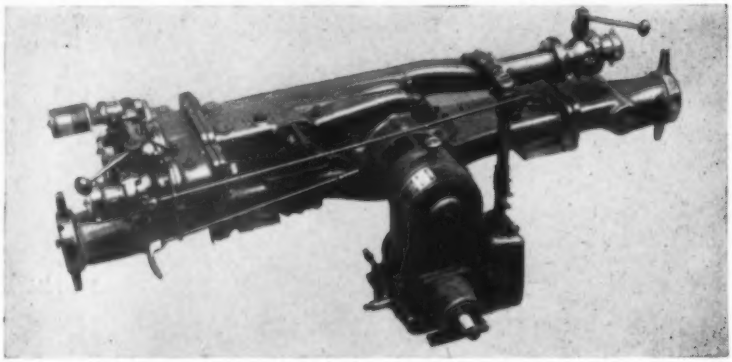

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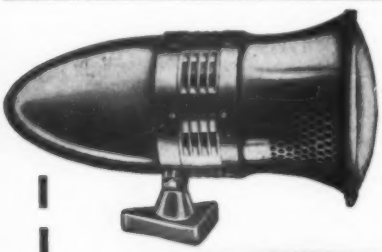

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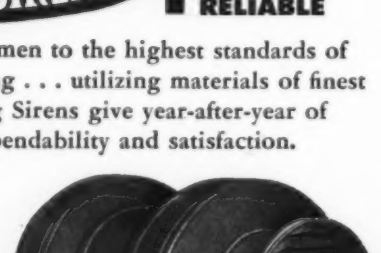

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THE STERLING SIREN FIRE ALARM CO., INC.
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Questions and Answers

Different Sizes of Suction Hose in Line

To the Editor:

I am writing with regard to a problem that came up in a class of firemen I am teaching and which caused quite a bit of discussion.

It seems that some of the boys in the class were called upon to pump water from an abandoned "stripping hole". These are quite common in this region.

The story goes that a youngster had fallen in this water hole and they were trying to pump the water out so as to recover the body.

The men took a 1000-gallon pumper to the scene and found that their two lengths of 5-inch suction hose would not reach the water. So they attached another length of 4½-inch suction to the other two lengths and drafted water. To make it clearer, the thirty feet was not a vertical lift but 30 feet of suction hose was needed to reach the water. I do not believe they knew how high the lift actually was, but they had an idea they were lifting it the 30 feet.

The real problem is this: A fellow who lives in the town where I am conducting the class and who is supposed to be an authority on pumps, told them they performed the impossible and he did not know how they did it. He was amazed that they got any water by attaching the smaller 4½-inch suction to the 5-inch suction.

I might be wrong, but personally I do not see anything so spectacular about this and I so told the class. I did, however, explain that by using the length of 4½-inch suction they would restrict the amount of water that could otherwise be drafted if they used all 5-inch suction and also explained the difference in the height by using large and small size suction hose.

I might also add that they said they got six good streams from the layout, but I cannot tell you how much water was discharged because they did not know what size tips or what engine pressure they were using.

In your opinion, did they perform a so-called "miracle" and do you think I was right in my explanation?

J. S.

Answer: The use of three sections of suction hose, even though one section is smaller than the other, certainly constitutes no miracle. The lift, however, should be not more than 25 feet. We have known instances of pumpers lifting water vertically by suction a distance of 28 feet, and operating continuously for hours. Theoretically, the maximum lift

of any pumping engine is 34 feet (approximately).

As to how many lines of hose a pumper could supply, when drafting water through two lengths of 5-inch suction and one of 4½-inch suction, this cannot be determined unless the sizes of nozzles, as well as the nozzle pressure, are known.

At any rate, there is nothing unusual about the layout nor about the ability of the pumper to draft water through the three sections.

Solving for Values of "K"

To the Editor:

I have for the last six weeks been trying to solve "K" for 2½-inch lines, but to no avail.

Either the book is wrong or I am at fault. In some of the values I prove correct; in others I am way off in comparison to the printed table on Page 69 of "Fire Service Hydraulics."

The answer for 1½-inch comes out .506, a discrepancy of .001.

For 1⅛-inch I get .160, a discrepancy of .008.

But now for the masterpiece:

For ¾-inch nozzle on 2½-inch line I get .31640625, which when divided by 10 as in the formula gives .031640625. The formula for finding K for 2½-inch lines is $D^2 \times D^2 \div 10$.

Upon working the formula to the third power I get .421875 which when divided by 10 gives .042, which corresponds to the answer.

Why should there be such a large discrepancy in this particular figure?

The formula works perfectly for the others and why should it not work the same for all?

G. B. P.

Answer: There is no method of solving for the values of K for different size nozzles on 2½-inch hose which will give accurate results for all sizes of nozzles.

In fact, the method suggested in some textbooks for finding the value of K is an approximate method only, and is to be used when the particular value of K is not remembered, nor can be secured from tables at hand.

Probably the best method of solving for K is by use of the engine pressure formula, and substituting experimental values for each symbol in the formula (with the exception of K) and thus solving for the value of K.

For example, the engine pressure formula is as follows: E. P. = N. P. × (1.1 + KL).

Bringing the N. P. over to the left hand size of the equation, we have E. P. ÷ N. P. = (1.1 + KL).

Bringing the 1.1 over to the left-hand side of the equation, we get (E. P. ÷ N. P.) − 1.1 = KL.

Then $K = \left(\frac{\text{E. P.}}{\text{N. P.}} - 1.1\right) \div L$

Now, using this formula, and submitting the values of E. P., N. P. and L for a given layout, we secure the value of K.

As an example, assume we have 400

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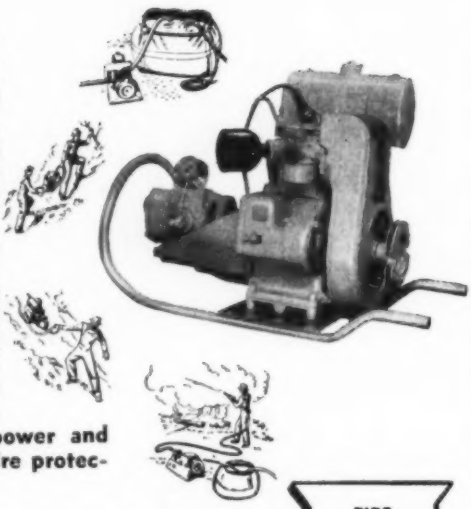

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feet of 2½-inch hose equipped with 1⅛-inch nozzle, and that the nozzle pressure is 50 pounds.

From fire hose tables we will find that the engine pressure is 120 pounds.

L, the number of 50-foot lengths of hose in the line, is equal to 400 ÷ 50, or 8.

Then substituting these values in the equation for K we get:

$$K = \left(\frac{120}{50} - 1.1\right) \div 8$$
$$= (2.4 - 1.1) \div 8$$
$$= 1.3 \div 8$$
$$= .162$$

This value is fairly close to the table value of K for 1⅛-inch nozzle on 2½-inch hose, which is .165.

But if we change the length of hose line, we'll get still another value of K.

For example, if 200 feet of 2½-inch hose is used, and the 1⅛-inch nozzle is still employed, the engine pressure will be 86 pounds where the nozzle pressure is 50 pounds. L will be equal to 4.

Substituting these values in the formula we get:

$$K = .62 \div 4$$
$$= .155$$

Notice that this value of K varies considerably from the table value of .165.

In other words, for different layouts, we'll get different values of K.

The values of K given in the table of K values are average values, and will not give entirely correct results except for one particular layout, where a certain amount of hose is used and a definite nozzle pressure and engine pressure are employed.

It is quite unfortunate that the formulas for engine pressure and nozzle pressure are not mathematically accurate. They are empirical formulas fitted to experimental results. While they give satisfactory figures, in view of the wide variation in friction loss in hose of different makes and different ages, the results do not follow an accurate mathematical pattern.

It is best to memorize the values of K and employ these values in solving for engine pressure and nozzle pressure.

Convention Dates

Sept. 14-15—JEFFERSON COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting and tournament, Philadelphia, N. Y. Secretary, Jack Farrell, 513 Lakeview Drive, Dexter, N. Y.

Sept. 18-20—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting, Lexington, Ky. Secretary, Lt. H. G. Bogenschutz, 100 W. 6th Street, Covington, Ky.

Sept. 19—FIRE CHIEF EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting, Harrison, N. Y. For information, contact Howard Geer, Secretary, Rye, N. Y.

Sept. 17-20—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Mark Hopkins Hotel, San Francisco, Cal. Secretary, Irvin Schulsinger, 11 West 42nd Street, New York 18, N. Y.

Sept. 28-29—INTERNATIONAL RESCUE AND FIRST AID ASSOCIATION. Annual meeting, Roanoke, Va. President, Julian S. Wise, Box 441, Roanoke, Va.

Oct. 8-12—NATIONAL SAFETY CONGRESS. Annual meeting and exposition, Chicago, Ill. General Secretary, R. L. Forney, 425 N. Michigan Ave., Chicago 11, Ill.

Oct. 15-17—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Norfolk, Neb. Secretary-Treasurer, Russell D. Salak, P.O. Box 312, Schuyler, Neb.

Oct. 17—FIRE CHIEF EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting, Pleasantville, N. Y. For information contact Howard Geer, Secretary, Rye, N. Y.

Fire Service Ladders

(*Continued from page* 751)

providing the fly ladder is properly locked in the main section.

It will be noted in Fig. 12 that with the fly located *under* the ladder, bringing the halyard on the *outside* the rope is more in the way of climbers and hose lines than where it is located *under* the ladder, as is the case when the fly ladder is raised toward the wall.

The concluding operation of this evolution is to adjust the heel or butt of the ladder the desired distance from the building. With this beam-type ladder, the distance should be approximately one-fifth the length of the ladder.

In moving out a ladder the lower hand should be as near the center of the rung as possible; the upper hand, well above, on the ladder, grasping the beam. Eyes should watch the foot of the ladder not the top unless the movement of the ladder against the building may cause some injury or damage. The practice of "jerking" out the base of any ladder is considered inadvisable.

Peabody Fire

(*Continued from page* 753)

Lost in the grain company building were two trucks. Two other trucks parked between the grain building and the Burnett Boiler plant were also destroyed.

Despite the large force of fire fighters, and the many spectators, no one was reported injured.

July Fire Losses

Estimated fire losses in the United States during July were $52,220,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is a decrease of 1.4 per cent from losses of $52,980,000 reported for July, 1950 and a decrease of 7.4 per cent from losses of $56,403,000 reported for June, 1951.

Losses for the seven months of 1951 now total $439,661,000, an increase of 4.6 per cent over the first seven months of 1950.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Better Communications

(*Continued from page* 756)

unless a town official requests the City of Binghamton to send equipment "at town expense." The Town of Binghamton, it is disclosed, has an agreement with the city of the same name whereby the latter will dispatch a fire fighting crew when requested to do so by an official of the Town. The city later bills the town for the service.

Meanwhile, Deputy Earl Allen, who was dispatched to make a search in a patrol car, located the fire and reported by radio that the house was beyond saving.

Fire Coordinator Youngs has issued an appeal to all residents of the county to "know your local fire department." He preaches: "You should learn the telephone number of your fire depart-

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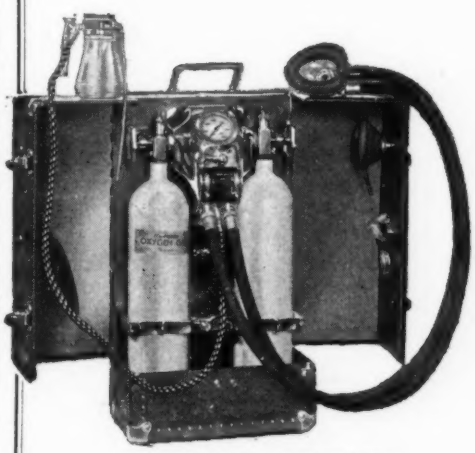

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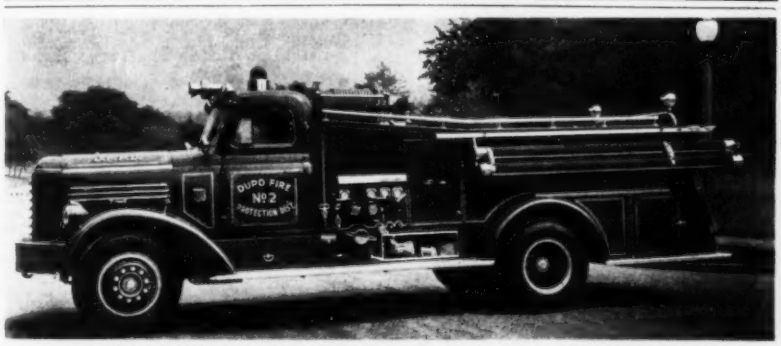

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ment and call it in case of a fire to save time. People who reside in the Town of Binghamton," he said, "should call their supervisor or some other member of the town board in case of fire." He said the unidentified woman who reported the morning fire apparently dialed the telephone operator, who relayed the call to the fire control center in the county sheriff's office and added that Conklin firemen cannot be criticized for refusing to go into another town to fight a fire. They have no contract with the Town of Binghamton and would not be protected under compensation if injured while responding to or fighting the fire.

Chicago Fireman Killed at 3-11 Alarm Blaze

One Chicago fireman was killed and 12 others injured when an explosion in a blazing taxpayer type building occurred as the fire appeared to have been brought under control.

Fire Commission Michael J. Corrigan estimated damage at $100,000. The fire destroyed two shoe stores, a women's apparel shop, a men's store, and an American Legion hall above the four shops.

Fireman Edwin F. Paulsen, 34, attached to Hook and Ladder 18, a box alarm company, was thrown from the roof of the two-story brick building by the blast. He and two other firemen were attempting to ventilate by prying open a roof level door of the Legion hall when the blast blew them to the ground under a shower of debris.

The two other firemen, Alex Derzinski, 33, and Ernest Everett, 34, both of Rescue Squad 9, were seriously injured.

Flying bricks and glass from the explosion injured the nine other firemen, some of them seriously. Nearly 50 spectators, mostly children, also were hurt by flying glass fragments.

The flames roared through the four stores and Legion hall in Chicago's busy 47th street and South Ashland avenue shopping district on the southwest side.

The blaze and explosion occurred close to noon and police sounded Emergency Plan 3 to control an estimated 5,000 spectators who crowded into the shopping area.

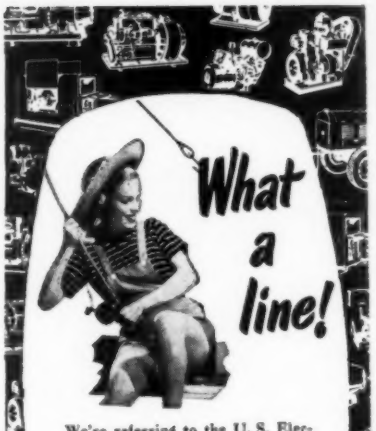
Fire Commissioner Corrigan theorized the explosion was caused by an accumulation of dust throughout the walls and above the false ceiling in the American Legion Hall.

"This stuff is worse than dynamite," Fire Commissioner Corrigan said.

Destroyed were the K. and G. Shoe Store at 4735 South Ashland avenue, where the fire is believed to have originated under a stairway in the rear of 4731 South Ashland avenue; the Cotton Shop, women's apparel, 4731½ South Ashland avenue, and a Thom McAn shoe store, 4733 South Ashland avenue. Above the four stores was the Frank Zientek Post 419 of the American Legion.

"We thought the fire was nearly over when the explosion let go," said Fireman Frank Mallon, 47, of Hook and Ladder 33, the still alarm ladder company.

Mallon, who was injured in the blast, said he and Captain James Cull, 61, and Fireman Edward O'Neil were manning a hose line at the entrance to the K and G Shoe Store when the blast let go.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"I heard two explosions," Fireman Mallon said. "Captain Cull and O'Neil fell down and the pipe swung around and hit me and threw me down."

Mallon was hurled 25 feet and received chest, abdomen, left knee and neck injuries.

The force of the blast knocked merchandise from shelves of nearby shops.

The fire communicated almost immediately to the Legion hall above and then downward to the other three stores. Oddly, the front wall and much of the roof of the K. and G. Store remained nearly intact but the roofs and front walls of the other three stores collapsed outward into the street.

Adjoining buildings, including a Neisner Bros. five and ten cent store, were protected behind firewalls and suffered only smoke and some water damage.

The blast knocked out windows of stores and residences within a one block radius and showered the area with bricks, glass, and pieces of timbers.

The co-managers of the K. and G. Shoe Store, where the fire is believed to have started, told Commissioner Corrigan they called the fire department promptly. Flames 10 feet high were leaping throughout the rear of the shop by the time the still alarm equipment arrived.

One of the managers said he threw a bucket of water on the flames but failed to douse them and immediately telephoned the Englewood Fire Alarm Office. The telephone alarm was recorded at 11:33 a.m., Friday, July 20, 1951.

The blaze in the busy business district is near the crowded Stock Yards. The area is referred to as the "Back of the Yards." The Back of the Yards council announced it created the Edwin Paulsen Family Fund. The council said it would seek contributions from 2,000 businessmen in the area. In addition it announced the net proceeds of the council's annual fair and festival, scheduled for July 25, five days after the fire would be turned over to the family.

As the fire was being brought under control a 2-11 alarm was sounded for a blaze at 35th street and Michigan avenue, also on Chicago's southside. The fire was in a two-story building housing doctors' offices and the Chicago offices of the Pittsburgh (Pa.) Courier, a Negro newspaper.

Following is the log of alarms:

11:33 a.m.—Telephone alarm of fire at 4735 South Ashland Avenue. Englewood alarm office sent Engine 116, Hook and Ladder 33, Rescue Squad 9, and the Chief of the 11th Battalion. Fire Insurance Patrol 4 also responded.

11:38 a.m.—Box 2232 at 47th Street and Ashland Avenue (less than half a block from the fire building) was pulled. Engines 49, 52, and 53 responded with Hook and Ladder 18, High Pressure wagon 5; the Fourth Division Marshal, and the 21st battalion chief.

11:44 a.m.—Box 2232—2-11—Engines 28, 39, 50, 59, 123; Hook and Ladders 8 and 52; Rescue Squad 3; High Pressure Wagon 3; Water Tower 3; Fire Ambulance 8; and the 26th battalion chief. Following companies changed quarters: Engines 12-39; 21-59; 54-116; 109-49; Hook and Ladders 31-33; 32-52; battalion chiefs 6-21 and 8-26.

11:53 a.m.—Box 2232—3-11—Engines 29, 48, 64, 65, 84; Hook and Ladder 51; Rescue Squad 8; High Pressure Wagon 1; Water Tower 1; and the 12th battalion chief. Following companies changed quarters: 17-29; 77-65; 98-48; 100-84; Hook and Ladder 37-18; and battalion chief 25-12.

12:26 p.m.—Fire struck out by orders of Chief Marshal Jeremiah McAuliffe.

PAUL C. DITZEL

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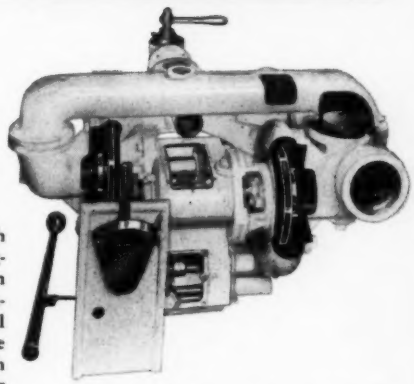

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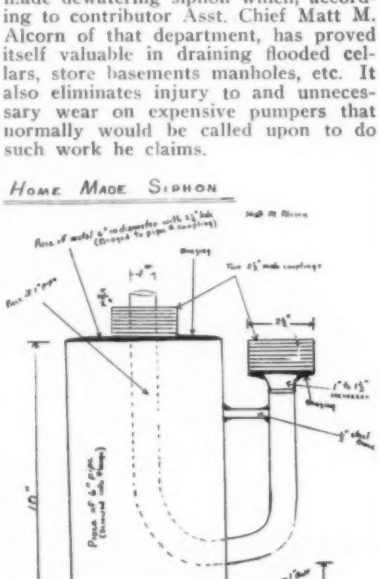
The Rosedale Fire Department, Verona, Penn., has been using a homemade dewatering siphon which, according to contributor Asst. Chief Matt M. Alcorn of that department, has proved itself valuable in draining flooded cellars, store basements manholes, etc. It also eliminates injury to and unnecessary wear on expensive pumpers that normally would be called upon to do such work he claims.

HOME MADE SIPHON



Fire Engineering has described and illustrated a number of de-watering devices over the years but is pleased to include the Rosedale appliance, pictured herewith.

The materials needed are two male couplings; a piece of 6-inch. pipe (or less) 10-in. long; a 6-inch flange, 10-in. in diameter, with at least four 1-in. bolt holes; a piece of 1-in. pipe 2-ft. long; a piece of thin gauge steel 6-in. in diameter; four 1-in. bolts with nuts; and a 1-in.-to-1½ in. reducer.

The siphon operates on the principle of an ejector. A line of 2½-in. hose is connected to the outside coupling from a plug or pump. Another 2½-in. line is connected to the "jet" side as an outlet for the waste water. Reducing the stream from 2½-in. to the 1-in. jet causes a high velocity which in turn creates a vacuum in the 6-inch. pipe. This takes the water from the flooded area along with the fresh water from the inlet. The siphon base is raised from the floor with several nuts on the bottom of each bolt. The male couplings are brazed to the 6-in. pipe and the 1-in. jet pipe. The 1-in. pipe is curved so as to be centered in the outlet coupling.

According to Chief Alcorn, such a device can be as high as 50% efficient. The amount of waste water is determined primarily by the pressure at the inlet and the velocity at the jet. The cost is practically nothing, he claims, as most material can be gathered from scrap. Thank you Chief Alcorn.

* * *

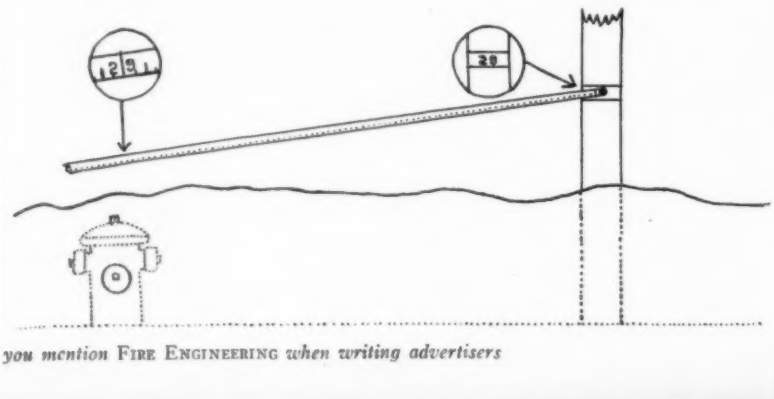
LOCATING SNOW-COVERED HYDRANTS

It's very nearly time for winter to be dishing up its woes for fire fighters of much of the nation. One of these headaches, particularly among firemen of areas where there may be considerable snow, is the job of locating snowed-in hydrants or other water supplies, in an emergency.

White band is painted on pole.

In the past, this column has reproduced several ideas to help solve the problem and now comes a slight variation on these suggestions from Contributor Henry T. Hanson who writes that several New England communities have adopted the system shown in the accompanying diagram.

The idea is to paint a yellow band



about 6-inch wide, around the nearest electric light (or other) pole to the hydrant (or other water source about six feet above the ground. The distance in feet from this band to the source of supply is painted in black numerals facing the hydrant or other source. A half-inch hole is bored into the pole at this band so that a pin fastened to the end of a roll tape measure may be plugged into it to permit the tape to be stretched out and the measurement of the distance taken.

Workmen with no knowledge of the hydrant or other supply locations have no trouble digging them out after a storm. Engine companies also carry a tape so that they can locate the supplies themselves if they encounter one that has not been cleared out. (Incidentally they also carry shovels—just in case.)

* * *

PULLING SWITCH IN GAS-FILLED ROOM

The old-timer says: If you're ever in doubt about the possibility of an explosion resulting from the pulling of a switch in a room that's charged with gas, extra protection can be secured by directing a discharge of CO^2 on the switch when it's opened.

* * *

WHEN POWER FAILS

The suggestion has been made that fire-escape doors, stairways and emergency exits be marked with luminous signs that will glow for a considerable time after power failure.

Such luminous (fluorescent) signs were used during World War II not only to indicate exits, but shelters and passageways. Luminous paint is also employed to mark fire hydrants and signs indicating fire alarm boxes, to speed their location in the dark. (Ed.)

* * *

TO IDENTIFY BUSTED HOSE LENGTHS

There may be more embarrassing situations for a firemen than to find he has re-connected a burst or otherwise damaged length of hose back into the hose line by mistake but we cannot think of one at the moment.

In order to make sure this sort of error cannot happen, the Old Timer "ties a knot" in all defective hose lengths on the fire ground. Nobody can mistake what that knot means in his department.

June Fire Losses

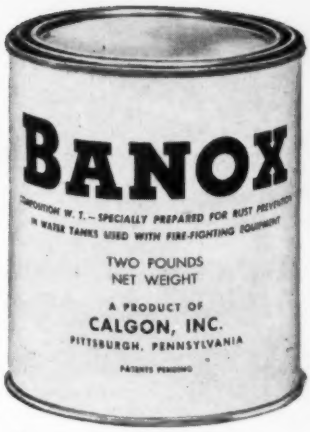
Estimated fire losses in the United States during June were $56,403,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is a decrease of 1.1 per cent from losses of $57,116,000 reported for June, 1950 and a decrease of 4 per cent from losses of $58,744,000 reported for May, 1951.

Losses for the six months of 1951 now total $387,441,000 an increase of 6 per cent over the first six months of 1950.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

STOP TANK RUST WITH BANOX*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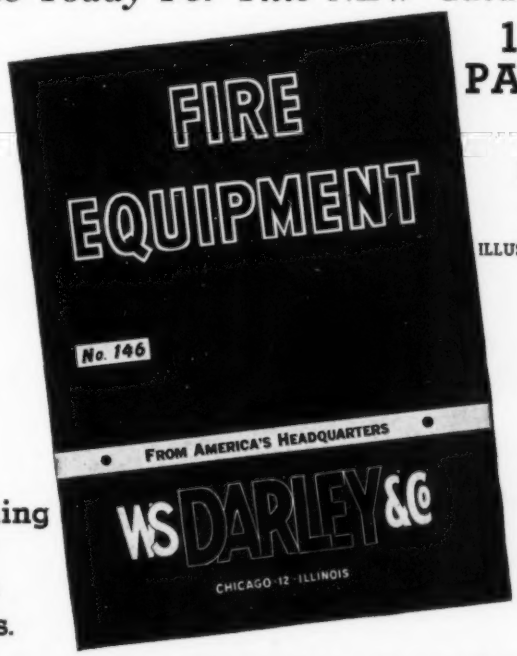

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DAS SCHLAUCHWESEN UND DIE WASSERFUHRENDEN ARMATUREN—by Ing. E. Finckh, Dr.-Ing. A. Closterhalfen, Branding K. Schlosser. Published in German, in connection with the German fire publication, *Die Deutsche Feuerwehr*, 1951, by Thebal-Verlag Stuttgart-O Alexanderstrasse 32, Postscheckkonto, Stuttgart 15054.

A manual devoted to the manufacture, care and treatment of fire and other hose, with illustrations, tables and diagrams. The eight chapters contain some information concerning early fires and fire fighting equipment. Cloth bound, 140 pages.

* * *

CIVIL DEFENSE IN MODERN WAR: A text on the protection of the civil population against A.B.C. (Atomic-Bacterial-Chemical) warfare. By Augustin M. Prentiss, Ph.D., Brig. Gen. U.S.A. (Ret.). McGraw-Hill Book Co., Inc., New York, N. Y., $6.00. The book also contains a chapter on "Air Power Today" by Austin M. Prentiss, Jr., Col. U.S.A.F.

In the 429 pages of his text, General Prentiss attempts to cover every major aspect of civil defense against atomic, bacterial and chemical warfare. The book is divided into three parts, the first dealing with modern air warfare, including types of aircraft used in modern war, such as pilotless bombers and guided missiles, the weapons employed by these aircraft, and the ways in which they should be dispersed.

Part II presents methods of protecting industries, homes and individuals against various destructive weapons. Part III discusses organization for civil defense, and is intended as a complete guide for a civil defense program for national, state and local governments.

Some of the information contained in the book of necessity has been published in previous texts issued by government and other sources, such as the Hopley Report, and manuals issued by the Federal Civil Defense Administration. However, this in no way detracts from the value of the text or its usefulness to civil defense and emergency protection forces. Actually, this is the first comprehensive work, which attempts to bring together between its covers all the basic fundamentals of defense against modern enemy attack in its worst forms.

Annual Reports Received

Hands Across the Sea

The editors acknowledge with appreciation, the Third Annual Report of the Fire Department of the City of Salford, England, A. A. Ashton, K.M., Chief Officer.

It is interesting to note the department protects 5,202 acres, all highly industrialized, including 5½ miles of quays in the dock area. Population is 176,870.

The fire force includes: 1 Chief Officer, 1 Deputy Chief Officer, 1 Department Maintenance Officer, 2 Station Officers, 5 Sub-Officers, 8 Leading Firemen and 73 Firemen. There are three officers listed under "Fire Protection," and a civilian staff. Equipment includes 1 turntable ladder; 2 pump escapes; 2 self-propelled pumps; 1 salvage tender; 1 towing vehicle; 2 general purpose vehicles; 3 staff cars; 1 motorcycle com-

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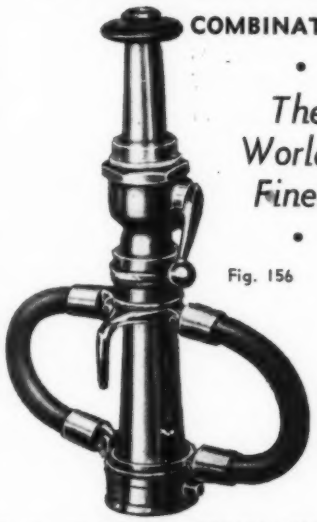
Fig. 156
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bination fog unit; 1 major trailer pump; 2 light trailer pumps and 1 "wheelbarrow" pump. There are also two A.F.S. "appliances," a self-propelled heavy pump and 1 major trailer pump.

Calls between April 1, 1950, and March 31, 1951, were 583, of which 47 were malicious false alarms. Actual fire loss for the period was 21,700 or .136 per cent of the property at risk.

* * *

Waterloo Fire Calls Drop

The 47th Annual Report of the Waterloo, Ia., Fire Department, Ray Tiller, Chief, reports fire losses of $169,179.74 for the year ending March 31, 1951. Fire calls numbered 847, a decrease of 91 from the year previous. There were 120 false alarms and unnecessary calls. Fire apparatus traveled 5,742 miles.

Chief Tiller recommends a new central office for the fire alarm system, replacement of old style fire alarm boxes; changes in parking ordinance and addition of a modern fire prevention ordinance; elimination of grade crossings, and provisions in the budget for a new 100 foot aerial ladder truck.

* * *

Quarterly Report of Ontario Fire Marshal

The quarterly bulletin of the Fire Marshal's Office, Province of Ontario, dated July 1, 1951, shows 28 persons killed and 108 injured by fire in the months of April, May and June, 1951. Fire losses for the first six months of 1951 were $8,924,511 compared with $11,760,100 for the same period in 1950. There was a decrease also of 570 in the number of fires.

The report describes the new well-equipped classroom for technical training recently added to the annex at the Fire Marshal's Office, 210 Huron st., and quotes from various data on civil defense and atomic attack published in the states. The Ontario Fire Marshal is William J. Scott.

* * *

Salt Lake City Wants New Fire Stations

Substantiated by the National Board's survey, the Annual Report of the Salt Lake City Fire Department for the year 1950 recommends at least three new fire stations. The removal of the Fire Alarm Office to a fire-resistive building is also advocated. A new drill tower is urged, as well as improvements in the fire alarm system. Additional new equipment is needed for fighting air crash fires also, it is disclosed.

There were 2324 fire alarms during 1950, of which 83 were false. Of the alarms, 1,938 were for fires, which caused total loss of $350,358. Fire apparatus traveled 13,263 miles and was in service 1,782 hours, according to fire chief J. K. Piercey's report.

* * *

So. Dakota Firemen's Training School Program

June 18-22, 1951, inclusive, marks the sessions for the 22nd Annual Fire School and the 67th Annual Convention of the South Dakota State Firemen's Association, scheduled this year to be held in Pierre, South Dakota.

A long and imposing list of speakers and instructors are scheduled for this important event. The program includes a history of the Pierre Fire Department and the South Dakota Firemen's Association.

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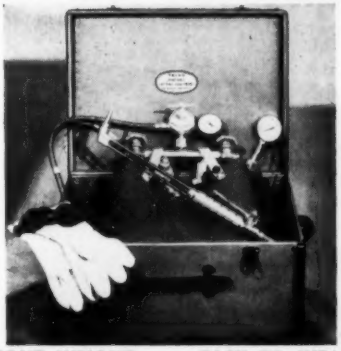
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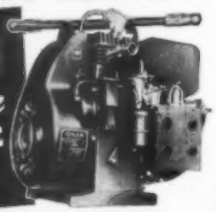

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Dominion Chiefs

(*Continued from page 752*)

P.A.; "Fire Prevention Through Education" by E. C. Wood, President, Imperial Tobacco Co.

Fire Marshal W. A. Walker, President, Association of Canadian Fire Marshals, presided at a forum consisting of Provincial Fire Marshals, and Fire Commissioners, during which a number of subjects were weighed, including the standardization of hose threads, which will get under way in southern Ontario shortly, according to Fire Marshal William J. Scott of Ontario. The latter also urged speed in the recruiting and training of auxiliary firemen in the Provinces.

On Tuesday evening over 500 delegates their wives and guests attended a civic banquet given in their honor at the Stork Club, Port Stanley, Ont. Buses conveyed the crowd to the electric railway where special cars carried them to the Port on Lake Erie. Here they were greeted by representatives of the Port Stanley Town Council, following a reception by John and Hugh Labatt, prominent Londoners. The guest speaker at the dinner was Miss Anne Armitt of the University of Western Ontario whose topic subject was "Humor". Miss Clark, daughter of Chief Clark, of Lakefield, entertained with several musical numbers. An informal dance was also enjoyed by the delegates and friends.

Wednesday's and Thursday's business sessions included papers on civil defense by Major F. C. Pace, R. C. A., M. C., Camp Borden, Ont., and Major-General F. F. Worthington, C. B., M. M., Civil Defense Coordinator of Canada. The problem of administering civil defense in the States was discussed by George Richardson, secretary-treasurer of the International Association of Fire Fighters. He joined with other speakers in urging that funds be made immediately available to properly implement civil defense.

In the absence of Chief Hugh Fisher of Lansing, Mich., the story of the long-drawn-out fight to save the Michigan State Office Building in Lansing was told by Ernest O. Kopietz, Lansing Fire Marshal, who with Michigan's Arnold Renner, directed fire fighting operations after Chief Fisher was temporarily incapacitated. Marshal Kopietz illustrated his talk with colored movies and still pictures.

Chief Beverly Wade of Kentville, S. C., spoke on "Volunteer Fire Departments", detailing the experiences of his own organization. On Thursday, Chief Norman Grover of General Motors Diesel Co., covered the topic "Industrial Fire Hazards." After which the sessions concluded with a Forum on "Fire Fighting Problems" conducted by Chief Roi B. Woolley, Assistant Editorial Director, FIRE ENGINEERING.

Time pressing, it was decided to answer the many questions presented to the Forum by the members for discussion in the form of a printed memorandum, and to include the questions and answers in the Association's book of proceedings. Those on the Forum included: Deputy Chief Foley, Vancouver, B. C.; Chief Robert Allen, Medicine Hat, Alta.; Chief George Bain, Brandon, Man.; Chief Gordon Huff, Brantford, Ont.; Chief Francois Premont, Arvida, Que., and Chief Holland S. Knight, St. John, N. B.

Manufacturers Have Their Innings

If a fire had broken out at Queens Park Western Fair Buildings on Wednesday afternoon, it wouldn't have had a chance, what with the more than 250 fire chiefs and as many more spectators and "buffs" in the fairgrounds area who had come to inspect the latest developments in fire apparatus and extinguishing agents, and in radio communications systems. The demonstrations were staged by the fire equipment manufacturers and the members of the London Fire Department and the Ontario Fire Marshal's office, under the direction of Captain Frank J. Tambling of the London department. Among the apparatus exhibited was a new 85-ft. Bickle-Seagrave aerial of the London Force, and a new American-LaFrance-Foamite pumper scheduled for Kingston, Ont. Demonstrations were given of various small "handy pumps" as well as the last word in high pressure pumps using water fog and wet water. Of special

A dangerous way to control river worms.

With flames just about enveloping his boots, a fireman climbs the Stonycreek River wall, at Johnstown, Pa., in order to escape a gasoline fire. The blaze was ignited as a means of destroying worms which were crawling from the river bed, up the wall and into nearby homes.

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interest were the demonstrations of the latest walkie-talkies and public address systems by means of which men in Hotel London, over a mile and a half away, talked with fire fighters on the Exposition grounds, and by which conversation between mobile units and the downtown headquarters was maintained.

During the equipment and training exhibition the D.A.F.C., delegates saw and inspected the Labatt disaster unit in operation—the "unit" consisting of several of the largest size trucks, a wrecking truck, and ambulance. Another feature was the showing of latest type respirators and inhalators and breathing apparatus, one model of which was equipped with telephone connection.

The annual banquet, Wednesday's colorful affair, was held in the Crystal ballroom (and adjoining anterooms) of the Hotel London. The speaker of the evening was Dr. Arthur R. Ford, Chancellor of the University of Western Ontario and vice-president of the London Free Press Publishing Co. Mr. Ford offered a three-point program for preserving democracy and freedom both in Canada and the United States and drew a parallel between his objectives and the aims carried out by firemen. The main objective, of firemen, he said, was to prevent fires rather than to fight them. Canadian citizens, he said, should (1) strive to prevent destruction of the nation's natural resources; (2) prevent the breakdown of our free democratic system of Government and (3) prevent wars, rather than fight them.

In the absence of Chief Rudolph Swanson, president of the International, who was forced to leave early, Chief Roi Woolley of Fire Engineering responded for the International, to Dr. Ford's address. As one publisher to another, Chief Woolley counseled the fire chiefs to take Chief Swanson's principles of cooperation to heart and to cooperate with their local newspapers and radio stations. These forces for good can be of great benefit to the fire service, he pointed out, through building favorable public relations and acceptance of the fire departments and of the recommendations made by fire chiefs for improving their fire departments.

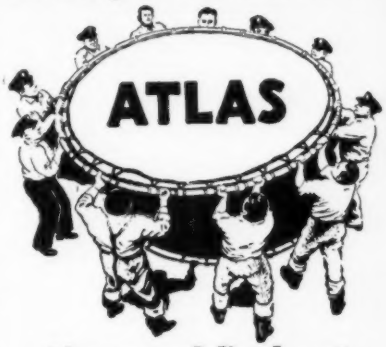
Concluding business sessions and formal election of officers were held on Friday morning. The Association unanimously supported a resolution strongly urging the government to pass civil defense budgets to assist municipalities organizing a defense setup. This resolution, similar to one passed by the International the week before in Grand Rapids, will be forwarded to Paul Martin, minister of health and public welfare in Ottawa.

The chiefs also unanimously endorsed a resolution opposing the present 10 per cent federal sales tax on municipal fire fighting apparatus. Earlier, President Short condemned the tax as being definitely "detrimental" to the further development and improvement of fire forces in municipalities across Canada.

Another resolution urging provincial governments and municipalities to ban the retail sale of fireworks to persons under 21 years of age and, in effect, restricting the sale of fireworks in Canada for 50 weeks of the year was also proposed. Some controls are necessary to eliminate, at least partially, potential dangers both to "life and property" from such hazards, chiefs maintain.

It was unanimously decided to accept

always **SPECIFY**



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88 CHAMBERS ST. NEW YORK 7, N. Y.

the bid of the city of St. John's, N. B., as the site of the 1952 Dominion Conference, the date to be announced later. The members of the Association also were invited by Toronto to hold its 1953 Conference in that city, possibly jointly with the International Association conference, which is expected to be held there that year.

The officers elected for the coming year to guide the Dominion are: president, Chief Secord Robinson, Kapuskasing, Ont.; first vice-president, Chief C. G. Burnett, Ottawa, Ont., and second vice-president Chief Francois Premont, Arvida, Que. Chief Allan Clark of Lakefield, Ont., was re-elected secretary-treasurer without opposition. Past president Short remains on the Board of Directors, which will include Chiefs R. C. McRonald, R. T. Brinelle of Victoria, B. C., A. J. Spence of St. Boniface, Man., and J. S. Thibault of Rouyn, Que. Representing the Industrial Chiefs is Chief C. Lenentine of St. Thomas, Ont. Representing the manufacturers are James Arnott, Wilson & Cousins, Ltd., Toronto, Ont. and C. C. Rollins, Bickle-Seagrave Ltd., of Woodstock, Ont.

As in the past, visiting ladies to the Conference were presented beautiful gifts and enjoyed a special program of entertainment. Besides the Civic banquet and the more formal banquet, to which they were invited, they had shopping tours, and visited the home of Mrs. C. C. Rollins, in neighboring Woodstock, where each received a silver bon bon dish. Each lady registering at the Conference also received a sterling silver souvenir spoon. Leather goods, candy, perfume and other gifts also were made during the Conference. Following the main banquet, drawings were held for numerous prizes awarded by the apparatus and equipment manufacturers and friends, after which a two hour entertainment was enjoyed.

General chairman of the convention committee was Deputy Chief T. Hepburn of the London Fire Department. He was assisted by Chiefs R. Moulden and D. Tindall, Captains N. Gallatly N. Wright and S. Ponsford; Clark H. Rammage, and Mrs. Norman Gallatly. A large staff of uniformed firemen attended to all the wants of the visitors, who departed with regret, loud in their praises of the beautiful city, its cultured people, and its outstanding fire department and Chief, R. M. McRonald—and his gracious lady Mrs. McRonald.

New York Volunteers Meet

The 52nd annual convention of the Western New York Volunteer Firemen's Association was brought to a close at Mount Morris, N. Y. on July 25 with a parade of 100 units of bands, drum Corps, fire companies and equipment, representing 14 counties in the western section of New York State. This was the largest parade ever seen in this Livingston County village.

The convention opened July 24 with a business meeting at the Mount Morris High School with president J. Frederick Beuerlein, presiding. Convention Chairman Frank J. Lopez officially opened the meeting and Craig C. Shurtleff, Mayor, and former Fire Chief, welcomed the firemen to the village. Beside the regular order of business an address to the delegates was given by Chief Gil Jenkins, Caledonia, on the Mutual Aid Program of Livingston County, of which he is the Coordinator. In the afternoon some 500 delegates were entertained at a picnic and a tour to the Mount Morris Dam in the Genesee River, the largest flood control dam in New York State.

The business sessions were resumed Wednesday morning with the following officers being elected; Harland Pope, Williamsville president; Harold E. Barrett, Greece, 1st Vice president; Fred Miller, Tonawanda, 2nd vice-president; James H. Surridge, Industry, secretary and Charles F. Irwin, Albion, treasurer. Albert J. Foley, Dunkirk attorney for the New York State Volunteer Firemen, addressed the meeting and gave his report on the legislature program of the state regarding the volunteer firemen. State Senator John H. Cooke, Alden, gave an interesting address about the Civil Defense program in New York State. The principal speaker of the convention was the Honorable James M. Mead, chairman of the Federal Trades Commission. Mr. Mead, a former U. S. Senator, who was born in Mount Morris, urged convention delegates not to relax their efforts toward a strong America, whatever the outcome of the present cease-fire negotiations in Korea.

Other highlights of the business meeting was the voting of the Western New York Association to contribute the sum of $12,000 for the expansion of the N. Y. State Firemen's Home at Hudson, N. Y. and the awarding of the 1952 convention of the association to Williamsville, N. Y. The delegates also went on record of favoring the legalization of benefit bingo games for nonprofit organizations in New York State.

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N.B.F.U. Surveys Aid Civil Defense

To assess vulnerability of U. S. cities to enemy aerial attack, the government is studying municipal fire safety surveys made by the National Board of Fire Underwriters. The cities' ability to combat fires started by bombing is also being checked. This action by the government was disclosed recently in a report presented at the National Board's 85th annual meeting at Hotel Commodore, New York City.

The surveys indicate that many American cities are improving their fire defenses by expanding water supplies and installing new fire alarm equipment. "There is a marked trend, especially in the larger cities, to replace old apparatus with new and modern equipment," the report stated.

Extensive improvements in water supply are in progress or have been completed in Boston, Mass.; Rochester, N. Y.; Miami, Fla.; Philadelphia, Pa.; Norfolk, Va., and Niagara Falls, N. Y.

Increasing peacetime use of atomic energy continues to present new fire hazards to American industry. A great deal of attention has been given to the problem of shipment and storage of radioactive isotopes originating from the Atomic Energy Program, the report stated.

This is being studied because firefighters might fear exposure to radiation and before salvage work could proceed, buildings, equipment and materials might in some cases have to be decontaminated.

The report stated that inspections of fire safety factors in 21 Pennsylvania State hospitals for the mentally deranged has been completed. The Pennsylvania Commission of Public Welfare requested the survey so as to know how much money would be needed to make improvements.

The National Board, which furnished engineering personnel to the armed forces in World Wars I and II, has offered its staff in advisory and consulting capacities in the present emergency, the report stated.

No More Rescue of Cats from Trees

Tree-climbing cats in Nichols, suburb of Bridgeport, Conn., have been "notified" they needn't expect any help from the Nichols Fire Department if they get themselves out on the well known limb. And the reason:

Public announcement of a "laissez-cat-fare" policy has been made by Fire Chief Oswald Hindle after he received an SOS to assist in the rescue of a tabby, stranded high in a tree on Huntington Turnpike.

The new insurance laws for firefighters do not include coverage for injuries incurred while rescuing felines from arboreal perches in open spaces. Fire Chief Hindle has recommended that members of the Save the Panicky Cat Association contact the ASPCA in similar emergencies.

Oh—what happened to the cat which perpetrated announcement of the New Order? It remembered the immortal lines from "Invictus"—"I am the master of my fate, the captain of my soul"—and climbed down under its own power.

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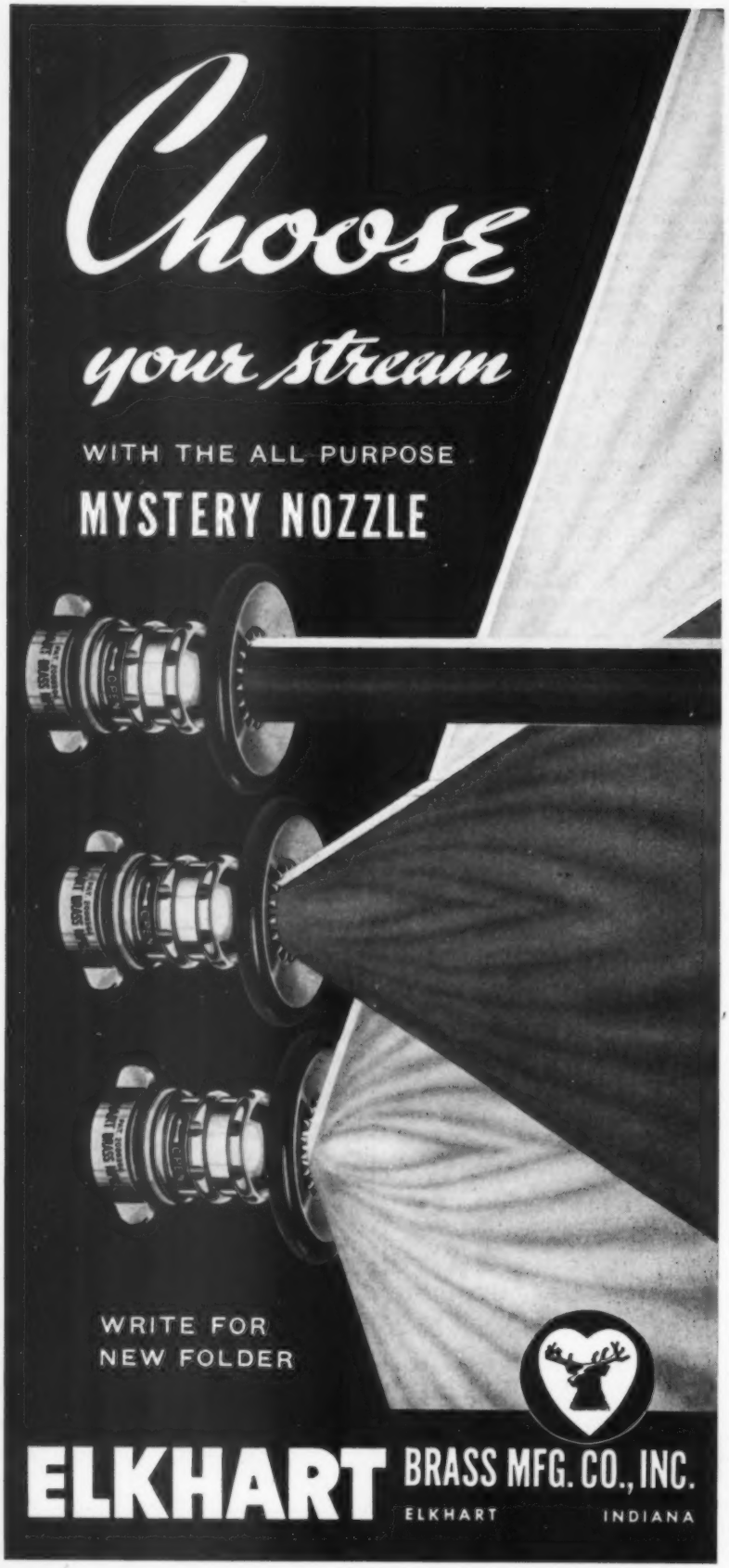

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Chief H. L. Baldwin wearing his shock-proof M.S.A. Helmet. The Kansas City, Mo., department has standardized on this proved head protection.

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